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ANNOTATED BIBLIOGRAPHY OF FOSSIL VERTEBRATES

The Upper Cretaceous of China and Mongolia

by Michael Klassen and Michael Ryan

Tyrrell Museum
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CULTURE AND MULTICULTURALISM

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FOREWORD

The references which follow all deal with some aspect of fossil vertebrates that have their origin in the Upper Cretaceous deposits of the People's Republic of China and the Mongolian People's Republic. We are confident that this bibliography is as complete as possible up until the end of 1985. References were located via library search and Interlibrary Loans, and these were then read, annotated and placed into the bibliography. Where it was necessary, the articles were summarized by our translators.

We feel the annotated entries are accurate, and the bibliography as a whole is comprehensive, but mistakes and omissions are sure to be found. We urge all users of this bibliography to bring these to our attention for correction in future editions. An index is included to make the information contained within the bibliography easier to access.

FORMAT- Each entry corresponds as closely as possible to the following format:

> *Articles in journals or journal collections- (author's name / year / title of article / title of collection [if applicable] / title of journal / volume and/or number [if both included, the number follows the volume in parentheses] / page numbers / illustrations present / number of references / language of publication if other than English).*
>
> *Books and articles in books- (author's name / year / title of article [if applicable] / title of book / editor [if applicable] / place of publication / publisher / page numbers / illustrations present / number of references / language of publication (if other than English).*

In some cases, complete information on an entry was not available. For example, some incomplete journal names have been left in abbreviated form.

We have tried to include the following information in each annotation, if it was contained in the article: the age, location and classification of each fossil discussed in the text, the formations they were found in, and any significant aspects of the discussion and conclusions. Any article that we were unable to obtain via Interlibrary Loans is followed by the notation "Not seen - not available through ILL," and we cannot vouch for its applicability to the subject area of this bibliography. Articles followed by "Not seen" alone may be available, but were not obtained in time for annotation in this bibliography. The remainder of unannotated articles remain applicable to the topic, but could not be annotated due to translation, time and funding constraints.

We have attempted to standardize the spelling of all foreign author and place names. For Chinese names, the Pinyin system of spelling implemented by the Chinese government is followed as closely as possible in translations and annotations. When the original language of publication was English, the original spelling of place names is retained, but in all other cases Pinyin revisions were made. For many obscure names, however, information for making spelling revisions is unavailable, and as a result the original names are used. For Russian, Mongolian and other foreign names, the most common form and/or modern convention is used in all translations and annotations, while the original spellings of place names are retained only in English titles. Again, standardization was not always possible. In many cases where a second form of the name is commonly used, it is cross-referenced in the text or in the index.

AGE AND SYSTEMATIC CLASSIFICATION- The most recent classification of all organisms is used in the annotations wherever possible. Whenever a scientific name is used in an annotation, it is followed by its most recent family designation. If the scientific name of a fossil discussed in an article has been revised since the date of publication, the new name follows the old in parentheses. In most cases the name changes are based on Olshevsky (1978) and Carroll (1988) unless other and generally accepted revisions were available. Most name changes are cross-referenced in the index.

For the most part, age designations in the annotations are those used in the original article, unless a change is well-established. Users of this bibliography should consult the index for recent publications dealing with specific formations or organisms in order to review discussions of age.

RELATED PAPERS- During the course of our search we came across many related references pertaining to Lower Cretaceous fossils of China and Mongolia, Cretaceous fossils of the USSR, various palaeontological expeditions, as well as articles dealing with the Cretaceous deposits of the entire region. Rather than ignore these references, we decided to include the first three groups of articles in the main body of the text. These articles are not annotated, but each one is followed by a short explanation of its significance. We stress that this bibliography is far from comprehensive in its coverage of these topics, and they are included only for convenience. A bibliography on geology is in preparation elsewhere.

INDEX- The numbers following index terms refer to the numbers that precede each entry in the bibliography. All place names, generic names and formations are included in the index, as are many systematic and general scientific terms. Many alternative names are also cross-referenced. The following abbreviations are used in the index:

PRC - People's Republic of China
FR - France
MPR - Mongolian People's Republic
NA - North America

PREFACE

The Dinosaur Project (Canada-China-Alberta-Ex Terra) was born as a result of a discussion in an office building in downtown Edmonton. Long before the project developed into a reality, the authors of this bibliography were approached to do a literature search for pertinent background information. The Bibliography has been in use as an unpublished document for many years now, and has proven itself to be of wide enough use to merit publication.

This represents the first major publication of the Dinosaur Project, but it will not be the last. The expeditions were initiated in 1986 when a Canadian team from the Tyrrell Museum of Palaeontology, the National Museum of Natural Sciences and the Ex Terra Foundation joined colleagues from the Institute of Vertebrate Paleontology and Paleoanthropology (Academia Sinica) in an exploratory expedition to Xinjiang in northwestern China. The fossil-bearing Jurassic and Cretaceous sites of the Junggar Basin looked promising, and we decided to return fully equipped to excavate dinosaurs in 1987.

For the balance of the 1986 field season, the Canadians and Chinese worked in Dinosaur Provincal Park in southern Alberta. Several dinosaur skeletons were excavated, but the real prizes were a nearly complete skull of a *Centrosaurus* and a partial skull of *Troodon*. The latter specimen, found by Tang Zhilu (IVPP), was especially significant symbolically (Troodontids are found in both Asia and North America) and scientifically (the specimen provides information on the relationship between birds and dinosaurs). Part of the Dinosaur Project Expedition staff went north in July to Axel Heiberg and Ellesmere islands to look for dinosaurs.

In 1987, as many as 45 Chinese and Canadians were in the field camp in the Junggar Basin. Turtles, crocodiles, theropods, sauropods, hypsilophodonts and tritylodonts were collected from the Jurassic Shishugou Formation. The two most significant specimens were an enormous sauropod with cervical vertebrae 1.5 meters in length, and a nearly complete, beautifully preserved large theropod.

The 1988 expeditions went to both Xinjiang and Inner Mongolia, finishing up work started in 1987, and initiating a two year field project to explore the Upper Cretaceous beds of China. This phase has the strongest relevance to the central theme of the Dinosaur Project: to come to a better understanding of the ancient ties between Canada and China.

Although the success of the expeditions to date cannot be attributed to the book you are holding, the bibliography has already made a significant contribution to the efficiency of the of the fieldwork and the research phase of the Dinosaur Project, and I am sure it will also continue to play a role as the exhibition and educational programs develop.

Philip J. Currie

Assistant Director

Research and Collections

Tyrrell Museum of Palaeontology

ANNOTATED BIBLIOGRAPHY OF FOSSIL VERTEBRATES
The Upper Cretaceous of China and Mongoliia

1 ANDREWS, ROY CHAPMAN, 1920. New expedition to Central Asia. Natural History, v. 20(4), p. 349-355, no refs.

Non-technical.

2 ANDREWS, R.C., 1920. In Mongolia and North China. Natural History, v. 20(4), p. 356-373, no refs.

Non-technical.

3 ANDREWS, R.C., 1923. Setting out for the buried treasure of Mongolia. Asia, (April), p. 242-245, 283- , illus., no refs.

A popular account of the 1922 Central Asiatic Expedition to Mongolia. The fossil localities and types of fossils found are briefly mentioned.

4 ANDREWS, R.C., 1923. A paradise for dinosaurs. Asia, (May), p. 336-340, illus., no refs.

The leader of the 1922 Central Asiatic Expedition to Mongolia recounts the trip across the Gobi Desert and the discovery of the first dinosaur fossils known from north of the Himalayas.

5 ANDREWS, R.C., 1923. Winter-cooled ardor for fossils. Asia, (November), p. 838-843, illus., no refs.

Although this article is mostly concerned with the various adventures and hunting exploits of the author during the 1922 Central Asiatic Expedition, brief mention is made of some Cretaceous dinosaur localities.

6 ANDREWS, R.C., 1923. The Third Asiatic Expedition resumes work in Mongolia. Natural History, v. 23(4), p. 406-407, no refs.

Brief report on the results of the 1922 expedition. "...the expedition unearthed a choice collection of fossils of large and small dinosaurs " (p. 407).

7 ANDREWS, R.C., 1923. The Third Asiatic Expedition. Latest reports from Mr. Roy Chapman Andrews. Natural History, v. 23(5), p. 525-527, no refs.

Andrews reports on the abundence of dinosaur material from Iren Dabasu.

8 ANDREWS, R.C., 1923. Dinosaur eggs discovered. Natural History, v. 23, p. 536, no refs.

This is the first report of the finding of dinosaur eggs and nests from Mongolia. At least seventy skulls and ten skeletons of primitive horned ceratopsians and contemporary carnivorous dinosaurs were discovered along with three nests and twenty-five dinosaur eggs.

9 ANDREWS, R.C., 1924. Where the dinosaur hid its eggs. Asia, (January), p. 9-15, 82-83, illus., no refs.

This article captures the excitement of the discovery of fossil dinosaur eggs made during the 1923 Central Asiatic Expedition. Descriptions of various fossil localities in Mongolia are also included in this popular article.

10 ANDREWS, R.C., 1924. The lure of Mongolia. Asia, (February), p. 137-144, illus., no refs.

For the most part, this article is a general review of the 1923 Central Asiatic Expedition. However, the author describes several dinosaur localities, including a hadrosaur bonebed at Iren Dabasu. The difficulties of bonebed excavation are discussed, and a reconstruction of the palaeoenvironment is made.

11 ANDREWS, R.C., 1926. The crowning discovery in the Gobi. Asia, v. 23(9), p. 287-370.

Andrews discusses the finding of seven Cretaceous mammal skulls at Shabarakh Usu(Bayn Dzak). There is also a discussion and photographs of the excavation of ***Protoceratops andrewsi*** material.

12 ANDREWS, R.C., 1927. Explorations in Mongolia: A review of the Central Asiatic Expeditions of the American Museum of Natural History. The Geographical Journal, v. 69(1), p. 1-23., illus., no refs.

This paper is a transcript of a lecture read to the Geographical Society in 1926, and gives an account of much of the work carried on in Mongolia as part of the Central Asiatic Expeditions in the preceding years. In addition to discussions of the geology, zoology and archaeology of Mongolia, a short review of paleontological finds is included.

13 ANDREWS, R.C., 1928. Return of the Central Asiatic Expedition. Natural History, v. 28, p. 555-556, no refs.

Non-technical.

14 ANDREWS, R.C., 1928. The Mongolian Colossus. Saturday Evening Post, v. 201(23), p. 8-9, 138, 140-141, 145, illus., no refs.

Popular account of the 1928 Central Asiatic Expedition to the Gobi Desert. The "Mongolian Colossus" refers to one of many large mammals found. Dinosaur eggs in nests and the remains of hundreds of "duck-billed iguanodonts" were also found.

15 ANDREWS, R.C., 1929. Further adventures of the American men of the dragon bones. Natural History, v. 29(2), p. 115-128, illus., no refs.

Popular account of the 1928 Central Asiatic Expedition. No direct reference to Upper Cretaceous vertebrates.

16 ANDREWS, R.C., (editor), 1932. The new conquest of Central Asia. A narrative of the Central Asiatic Expeditions in Mongolia and China, 1921 - 1930. *In* Natural History of Central Asia. New York: American Museum of Natural History, v. 1, 678 pp., illus.

A semi-scientific narrative of the Central Asiatic Expeditions to Mongolia and China between 1921 to 1930. This gives a complete account of all parts of the expeditions including all localities visited.

17 ANDREWS, R.C., 1933. Explorations in the Gobi Desert. National Geographic, v. 63(6), p. 653-692.

Discussion of the work of the Central Asiatic Expedition of the American Museum of Natural History.

18 ANDREWS, R.C., 1937. Consider the dinosaur. Scientific American, v. 156(1), p. 149-152.

This is a general discussion of dinosaurs with mention being made of Asiatic types. A photograph of a *Protiguanodon(=Psittacosaurus) mongloiense* skeleton showing "stomach stones" is included.

19 ANDREWS, R.C., 1943. *Under a Lucky Star*. New York: The Viking Press, illus.

An autobiographical account of the life of Roy Chapman Andrews. The expeditions to Asia and the Gobi Desert are recounted.

20 ANDREWS, R.C., 1953. *All About Dinosaurs*. New York: Random House, illus.

Popular juvenile textbook on dinosaurs. An account is given of the Central Asiatic Expeditions including descriptions of the material from the Gobi Desert.

21 ANDREWS, R.C. and MATTHEW, W.D., 1922. Gobi - A desert "wonder-house". Asia, (January-December), p. 959-1005.

General article on the work of the Third Asiatic Expedition in the Gobi Desert.

22 ANONYMOUS, 1921. Mr. Walter Granger and the Third Asiatic Expedition. Natural History, v. 21(3), p. 320, no refs.

Non-technical.

23 ANONYMOUS, 1928. Central Asiatic Expedition's new finds. Natural History, v. 28, p. 442-443, no refs.

Non-technical.

24 ANONYMOUS, 1929. Accessions of the museum from the Central Asiatic Expedition. Natural History, v. 29, p. 557-558, no refs.

Brief description of the preparation and display of material collected by the 1928 Central Asiatic Expedition at the American Museum of Natural History. No direct reference is made to Upper Cretaceous vertebrates.

25 ANONYMOUS, 1933. Expedition for Lower Cretaceous dinosaurs. Natural History, v. 33, p. 103, no refs.

Lower Cretaceous

26 ANONYMOUS, 1937. Report of dinosaur cemetery in Kzyl-Kum desert. Science, (New Series), v. 86, suppl. 2233, p. 14.

USSR

27 ANONYMOUS, 1953. New paleontological discoveries in China. Priroda, v. 9, p. 58., no refs., (Russian).

28 ANONYMOUS, 1985. *Exhibition of Dinosaurs: Gobi Desert*. Tokyo: Nihon Taigai Bunka Kyokai, 44 pp., illus., no refs., (Japanese with Russian summary)

29 ANONYMOUS, 1985. Society of Vertebrate Paleontology of China inaugurated. Vertebrata PalAsiatica, v. 23(1), p. 87-88, no refs.

A new Chinese vertebrate palaeontology society (SVPC) held its inaugurating conference on October 17, 1984 at Laiyang, Shandong. It was from the Cretaceous of Laiyang that one of the first known dinosaurs of China (*Tanius*, Hadrosauridae) was excavated by the late S.S. Tan in 1923. In 1951, a team headed by T.S. Lui, then on staff with the Institute of Vertebrate Paleontology and Paleoanthropology, also excavated dinosaur nests, fossil lycopterid fishes and the skeletons of *Tsintaosaurus* (Hadrosauridae) and *Psittacosaurus* (Psittacosauridae).

30 BACHOURINA, N.N., 1982. A pterodactyl from the Lower Cretaceous of Mongolia. Paleontological Journal, v. 16(4), p. 105-109, illus., 2 refs.

Lower Cretaceous

31 BACHOURINA, N.N., 1983. Early Cretaceous locality of pterosaurs in western Mongolia. *In* Fossil Reptiles of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 24, p. 126-129, illus., 9 refs., (Russian).

Lower Cretaceous

32 BACSKAI, J.A., BRYANT, L.J., GREGORY, J.T., SHKURKIN, G.V., and WINANS, M.C., 1983. Bibliography of fossil vertebrates 1973 - 1977 (2 volumes). The American Geological Institute, 1101 pp.

33 BAKHURINA, N.N., see BACHOURINA, N.N.

34 BARSBOLD, RINCHEN, 1972. The taphonomy of the fauna of the Late Cretaceous of the MPR. Akademiia Nauk MNR, Geology Institute, p. 53-60, (Russian).

Not seen - unavailable through ILL

35 BARSBOLD, R., 1974. Dinosaurs' duel. Priroda, no. 2, Feb., p. 81-83, illus., 5 refs., (Russian).

A popular description of the unusual discovery of two dinosaurs, the herbivorous ***Protoceratops andrewsi*** (Protoceratopsidae) and the carnivorous ***Velociraptor mongoliensis*** (Dromaeosauridae), found fossilized in the skeleton. The family Saurornithoididae recovered in 1971 from Khermeen Tsav, also attempted.

36 BARSBOLD, R., 1974. Saurornithoididae, a new family of small theropod dinosaurs from Central Asia and North America. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part V. Palaeontologia Polonica, no. 30, p. 5-22., illus., 25 refs. ***Saurornithoides junior*** sp. nov. (Saurornithoididae, fam. nov.) from the locality of Bugeen Tsav in the Nemegt Formation (Maastrichtian) of the Gobi Desert is described based on a nearly complete skull and a fragmentary postcranial skeleton. The family Saurornithoididae is defined as including ***Saurornithoides*** and ***Stenonychosaurus***(now =***Troodon***). This designation leaves the Troodontidae with only a single genus, ***Troodon***.

37 BARSBOLD, R., 1976. A new Late Cretaceous family of small theropods (Oviraptoridae fam. nov.) in Mongolia. Akademiia Nauk SSSR, Doklady (Earth Sciences Section), v. 226(1-6), February., p. 221-223, 5 refs.

New fossil material of ***Oviraptor philoceratops*** (Oviraptoridae, fam. nov.) were recovered in 1971 from Khermeen Tsav, Mongolia. Rediagnosis of this material, now known from the Upper Cretaceous localities of Bayn Dzak and Khermeen Tsav (Djadohkta and Barun Goyot Formations, Campanian), has prompted the author to establish this species in a new family, Oviraptoridae fam. nov. The Oviraptoridae is distinguished from the Ornithomimidae by several aspects of the skull: its short, deep nature; functional interpretations of the jaw apparatus; and characteristics of the pelvis and pes. The new ***Oviraptor*** material is described.

38 BARSBOLD, R., 1976. On the evolution and systematics of late Mesozoic dinosaurs. *In* Paleontology and Biostratigraphy of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 3, p. 68-75, 359, 379, 26 refs., (Russian with English summary).

Beginning in the Jurassic, carnosaurs followed several lines of development leading to a series of specialized groups by the Cretaceous. It is suggested that the number of members in the infraorders Coelurosauria and Carnosauria be reduced. The infraorder Deinonychosauria is considered to be valid. It is proposed that the infraorders Oviraptorosauria, Ornithomimosauria and Deinocheirosauria

be established on the basis of peculiarities of their pelvis, skull and anterior extremities.
(Annotation from English summary by journal)

39 BARSBOLD, R., 1976. New data on *Therizinosaurus* (Therizinosauridae, Theropoda). *In* Paleontology and Biostratigraphy of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 3, p. 76-92, 359-360, 380, illus., 21 refs., (Russian with English summary).

The first description is given of a front limb and scapulacoracoid of *Therizinosaurus* (Therizinosauridae, fam. nov.). This dinosaur was known previously only from gigantic ungulal phalanges from the Upper Cretaceous of Mongolia. *Therizinosaurus* is shown to be affiliated with the Theropoda, not turtles as previously suggested, and the family Therizinosauridae is established.
(Annotation from English summary by journal)

40 BARSBOLD, R., 1977. Saurier in der Wuste Gobi. Urania-Universum, v. 5(23), p. 507-511.

Not seen - unavailable through ILL

41 BARSBOLD, R., 1977. On the evolution of carnivorous dinosaurs. *In* Mesozoic and Cenozoic Faunas, Floras and Biostratigraphy of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 4, p. 48-56, 163, 169, illus., 20 refs., (Russian with English summary).

General tendencies in the evolution of theropods are discussed based on a new classification proposed by Barsbold.
(Annotation from translation by journal)

42 BARSBOLD, R., 1977. Kinetism and speciality of the jaw apparatus among the oviraptors (Theropoda, Saurischia). *In* Mesozoic and Cenozoic Faunas, Floras and Biostratigraphy of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 4, p. 34-47, 163, illus., 27 refs., (Russian with English summary).

The jaws of oviraptors possess the ability to exert strong compressional forces, possibly as an adaption to crushing the eggs of dinosaurs. Three species of oviraptors developed in the latter half of the Cretaceous: 1) *Oviraptor phyloceratops* (sic) (Oviraptoridae) from Bayn Dzak, Djadokhta Formation; 2) oviraptors from Khermeen Tsav, Barun Goyot Formation (?Lower Campanian); and 3) oviraptors from Khermeen Tsav and Bugeen Tsav (Bugin Tsav), Barun Goyot Formation (?Upper Campanian).

43 BARSBOLD, R., 1979. Opisthopubic pelvis in the carnivorous dinosaurs. Nature, v. 279(5716), June 28, p. 792-793, illus., 16 refs.

The Mongolian dinosaurs *Velociraptor* (Dromaeosauridae), the segnosaurids, and a new genus from Khar Khutul all have pubes oriented parallel to the ischia, which are similar to the postpubes in primitive ornithischians. This reflects to some extent the relationship of the two types of pelves and confirms the unity of the dinosaur stock.

44 BARSBOLD, R., 1981. Intercontinental relations of the carnivorous dinosaurs and biostratigraphic correlation of the Cretaceous of the MPR. Akademiia Nauk MNR, Geology Institute, no. 5, (Russian).

Not seen - unavailable through ILL

45 BARSBOLD, R., 1981. Untoothed carnivorous dinosaurs of Mongolia. *In* Fossil Vertebrates of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 15, p. 28-39, 9 refs., (Russian with English summary).

The new family Garudimimidae(=Ornithomimidae) (infraorder Ornithomimosauria) with the single genus and species *Garudimimus breviceps* gen. et sp. nov. is proposed. The new subfamily Ingeninae (Oviraptoridae) with a single new genus and species *Ingenia vanshini* gen. et sp. nov. is also proposed.
(Annotation from English summary by journal)

46 BARSBOLD, R., 1983. Carnivorous dinosaurs from the Cretaceous of Mongolia. *In* The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 19, p. 5-117, 279 refs., (Russian with English summary).

The first detailed comparative study of all Mongolian theropods is presented. The Mongolian data supports the idea that carnivorous dinosaurs evolved in several parallel lines and that the theropods should not be divided into only carnosaurs and coelurosaurs.

The relationship of the theropods to other archosaurs, including *Archaeopteryx* (Archaeopterygidae), is discussed. The ornithischian pelvis probably evolved from a saurischian one, implying that the dinosaurs were monophyletic.

The Theropoda includes at least 19 families united into seven infraorders of which four infraorders and nine families are known mostly from Mongolian material.

Barsbold's revised definition of the Theropoda is listed below.

FAMILY Saurornithoididae(=Troodontidae)
Saurornithoides mongoliensis
Saurornithoides junior
FAMILY Dromaeosauridae

Subfamily Dromaeosaurinae
    Adasaurus mongoliensis gen. et sp. nov.
Subfamily Velociraptorinae
    Velociraptor mongoliensis
FAMILY Oviraptoridae
Subfamily Oviraptorinae
    Oviraptor philoceratops
Subfamily Ingeniinae
    Ingenia yanshini
FAMILY Caenagnathidae
    Caenagnathus collinsi
    Caenagnathus sternbergi
FAMILY Tyrannosauridae
    Tarbosaurus efremovi(= T. baatar)
FAMILY Ornithomimidae
    Ornithomimus(= Archaeornithomimus)
    Gallimimus bullatus
FAMILY Garudimimidae(=Ornithomimidae)
    Garudimimus breviceps
FAMILY Deinocheiridae
    Deinocheirus mirificus
FAMILY Therizinosauridae
    Therizinosaurus cheloniformis
FAMILY Segnosauridae
    Segnosaurus ghalbiensis
    Erlikosaurus andrewsi

47 BARSBOLD, R., 1983. On some bird features in the morphology of Carnosaurs. *In* Fossil Reptiles of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 24, p. 96-103, illus., 28 refs., (Russian with English summary).

This article is a short review of bird features in the skeleton of carnivorous dinosaurs.
(Annotation from English summary by journal)

48 BARSBOLD, R. and PERLE, ALTANGEREL, 1979. Modification of the saurischian pelvis and the parallel development of carnivorous dinosaurs. *In* Mesozoic and Cenozoic Faunas of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 8, p. 39-44, illus., 18 refs., (Russian with English summary).

On the basis of the construction of the pelvic girdle, three different infraorders of carnivorous Saurischia are defined.
(Annotation from English summary by journal)

49 BARSBOLD, R. and PERLE, A., 1980. Segnosauria, a new infraorder of

carnivorous dinosaurs. Acta Palaeontologica Polonica, v. 25(2), p. 187-196., 9 refs.

The new infraorder Segnosauria is established on the basis of the pelvis, mandible, and anteriorly edentulous upper and lower jaws of Late Cretaceous dinosaurs found at several localities in SE Mongolia. ***Erlikosaurus andrewsi*** gen. et sp. nov. (Segnosauridae) is preliminarily described. A short description of ***Segnosaurus galbinensis*** (Segnosauridae) is included.

50 BARSBOLD, R. and PERLE, A., 1983. On taphonomy of joint burying of juvenile dinosaurs and some aspects of their ecology. *In* Fossil Reptiles of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 24, p. 121-125, 12 refs., (Russian with English summary).

A unique locality of juvenile dinosaurs and their taphonomy are discussed.
(Annotation from English summary by journal)

51 BARSBOLD, R. and PERLE, A., 1984. The first record of a primitive ornithomimosaur from the Cretaceous of Mongolia. Paleontological Journal, v. 18(2), p. 118-120, illus., 10 refs.

Lower Cretaceous

52 BARSBOLD, R., VORONIN, YU.I. and ZHEGALLO, U., 1971. The work of the Soviet-Mongolian Paleontological Expedition in 1969-1970. Paleontological Journal, v. 2, p. 272-275., no refs.

During the 1969-70 expedition, considerable material was collected from Upper Cretaceous localities in Mongolia. Approximately 40 ***Protoceratops*** (Protoceratopsidae) skeletons, several clutches of dinosaur eggs, small lizards and a ***Velociraptor*** (Dromaeosauridae) skull were excavated from the Toogreegeen Shireh site (north of Bulgan Somon, age equals site at Bayn Dzak). Armoured dinosaur material was collected at the Alag Teg site. A unique clutch of large dinosaur eggs was found at the Algoy Ulan Tsav site. In Transaltay Gobi the remains of turtles, carnosaurs, crocodiles, sauropods and pelycopods were found in the upper unit of the Khermeen Tsav area. ***Protoceratops*** remains were found in the lower unit. Turtle remains came from the Nemegt Basin and the Ingeni Khoboor Depression. Crocodile, turtle and dinosaur material were recovered from the Ulan Khushu, Tsagan Khushu, Nogon Tsav, Sheeregeen Gashoon and Gurilyn Tsav sites in SE Gobi.

53 BELIAJEVA, YE.I., RESHETOV, U.YA. and TROFIMOV, B.A., 1973. The

basic stages in the evolution of the late Mesozoic-Paleogene mammals of Central Asia. Moskouskoye Obshchestuo Ispytately Prirody, Byulleten', Otdel Geologicheskiy, v. 48(1), p. 153-154, no refs., (Russian).

This article is a brief review of Cretaceous mammals found from 1969 to 1972 in Central Asia by the Soviet-Mongolian Paleontological Expedition. New species of mammals from the Triconodonta, Symmetrodonta, Insectivora and Plagiaulacoidea were found in the Lower Cretaceous deposits of Khoboor in the northern Gobi. These were found in association with several types of dinosaurs, including *Psittacosaurus mongoliensis* (Psittacosauridae) and several carnosaurs and sauropods, as well as turtles and lizards. The mammals seem to have affinities to the Upper Cretaceous fauna of Bayn Dzak in particular the genera *Kennalestes* (Kennalestidae) and *Zalambdalestes* (Zalambdalestidae). Paleocene and Eocene mammal faunas found in the area are also discussed.

54 BELIAJEVA, YE.I., TROFIMOV, B.A. and RESHETOV, V.J., 1974. General stages in evolution of late Mesozoic and early Tertiary mammalian fauna in Central Asia. *In* Mesozoic and Cenozoic Faunas and Biostratigraphy of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 1, p. 19-45, (Russian with English summary).

This paper summarizes all new data on the history of the Late Mesozoic and Paleocene mammal fauna from Central Asia. The Lower Cretaceous mammals from Khoboor locality, Ubur Khangi region, MPR are discussed in some detail.
(Annotation from English summary by journal)

55 BELYAYEVA, YE.I.: see BELIAJEVA, YE.I.

56 BEXELL, GERHARD, 1945. Geological and paleontological investigations in Mongolia and Kansu 1929 - 1934. The Sino-Swedish Expedition - publication 26, part 4, p. 195-254, illus., no refs .

57 BING ZHI and YEN T.C., 1933. Descriptions of two new fossil fishes from Zhejiang. Bulletin of the Geological Society of China, v. 12, p. 209-273, illus.

Lower Cretaceous

58 BOCCARDI, V., and BOCCAZZI, C., 1973. *Il cimitero dei dinosauri*, 2nd edition. Milan: Sugar Ed., 164 p., illus., (Italian)

Not seen

59 BOHLIN, BIRGER., 1935. Einige Fundorte fur Fossile Vertebraten in Nordwest China. Petermanns (Geographische) Mitteilungen, v. 81, p. 285-286., (German)
[Also in: Ymer, 1935, p. 311-312].

60 BOHLIN, B., 1941. Palaeontological and geological researches in Mongolia 1929 - 1933. The Sino-Swedish Expedition, publication 26, part 4, p. 255-325, illus., 12 refs.

61 BOHLIN, B., 1953. Fossil reptiles from Mongolia and Kansu. The Sino-Swedish Expedition, publication 37, part 6, p. 1-113, illus., 92 refs.

This publication reviews the fossil material collected from Inner Mongolia and western Gansu from 1929 to 1931 by the Sino-Swedish Expedition. Fragmentary remains of fifteen dinosaur species and five turtle genera were found, as well as some crocodile teeth. The Upper Cretaceous material, described in detail by the author, is listed below by location.

Ulan Tsonch and Tebch: Crocodile sp. indet., *Velociraptor mongoliensis* (Dromaeosauridae), *Protoceratops andrewsi* (Protoceratopsidae), *Prodeinodon* sp. (Tyrannosauridae), *Psittacosaurus mongoliensis* (Psittacosauridae).

Tsondolein Khuduk: theropod gen. et sp. indet., *Troodon bexelli* (?Troodontidae), nodosaurid sp. indet., *Microceratops gobiensis* sp. nov. (Protoceratopsidae), Mammalia indet.

Ug Tokhoi: Sauropoda indet.

Chiayukuan: *Chiayusuchus cingulatus* sp. nov. (Stomatosuchidae), Theropoda sp. indet., *Chiayusuchus lacustris* (Stomatosuchidae), *Heishansaurus pachycephalus* sp. nov. (Ankylosauridae), ?*Microceratops sulcidens* sp. nov. (Protoceratopsidae), *Osteopygis kansuensis* sp. nov. (Toxochelyidae), *O. latilimbata* sp. nov. (Toxochelyidae), *Heishanemys imperfectus* sp. nov. (Ankylosauridae), *Tsaotanemys rugosus* sp. nov. (Dermatemydidae), *T. undulatus* sp. nov. (Dermatemydidae).

Ehrchiawutung: *Peishansaurus philemys* sp. nov. (Ankylosauridae), *Peishanemys latipons* sp. nov. (Dermatemydidae).

Several Lower Cretaceous reptiles are also mentioned in this manuscript. The ages and stratigraphy of the above species are not dealt with in great detail by the author.

62 BORING, A.M. and LEROY, P., 1945. Chinese amphibians: living and fossil forms. Publications de L'Institute de Geobiologie, v. 13, 152 p.

Not seen

63 BORISSIAK, ALEXEI ALEXIEUICH, 1929. A new find of dinosaurs in the Mesozoic of Central Asia. Priroda, no. 3, p. 260, (Russian).

USSR

64 BORSUK-BIALYNICKA, MAGDALENA, 1977. A new camarasaurid sauropod *Opisthocoelicaudia skarzynskii* gen. et sp. nov. from the Upper Cretaceous of Mongolia. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part VII. Palaeontologia Polonica, no. 37, p. 5-64, illus.

A description and illustration is given of an almost complete skeleton of *Opisthocoelicaudia skarzynski* (Camarasauridae [?Euhelopodidae]) from the Upper Cretaceous Nemegt Formation, Gobi Desert. A reconstruction of the muscular system as well as the whole animal is diagrammed.

65 BORSUK-BIALYNICKA, M., 1978. *Eopelobates leptocolaptus* sp. n., the first Upper Cretaceous pelobatid frog from Asia. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part VIII. Palaeontologia Polonica, no. 38, p. 57-62, illus., 8 refs.

The specimen (fragmentary skull and pectoral girdle) of *E. leptocolaptus* (Pelobatidae) described in this paper is from the (?)Middle Campanian Red Beds of Khermeen Tsav, Gobi Desert. It offers proof of the Holarctic distribution of this genus in the Upper Cretaceous.

66 BRATTSEVA, G.M., and NOVODVORSKAYA, I.M., 1976. The conditions of burial of the Lower Cretaceous fauna and flora at the find-localities of Buylyasutuin-Khuduk and Anda-Khuduk, Valley-of-the-Lakes Depression, Mongolia. *In* Paleontology and Biostratigraphy of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 3, p. 285-290, 363, 382, illus., (Russian with English summary).

Lower Cretaceous

67 BRETT-SURMAN, MICHAEL K., 1979. Phylogeny and palaeobiogeography of hadrosaurian dinosaurs. Nature, v. 277(5697), February 15, p. 560-562, 13 refs.

A new hadrosaur phylogeny is proposed that recognizes two subfamilies, the Hadrosaurinae and the Lambeosaurinae. *Gilmoreosaurus mongoliensis* (Hadrosauridae), from the Iren Dabasu Formation, (Cenomanian?) is the first representative of the Hadrosaurinae in Asia. *Bactrosaurus johnsoni* (Hadrosauridae) from the Iren Dabasu Formation is the first known lambeosaurine.

68 BRETT-SURMAN, M.K., 1980. The Iren Dabasu fauna from Mongolia. *In* New Mesozoic Faunas (Olshevsky, George, editor). Mesozoic Vertebrate Life, no. 1, p. 19-22, illus., no refs.

A brief survey is made of the dinosaur fauna from the Iren Dabasu fauna (of China) found in the 1920's by the American Museum of Natural History expeditions. The families of dinosaurs and their palaoecology are described, as well as the present-day research being carried out in the United States on the expedition material. The hadrosaurs *Gilmoreosaurus* (Hadrosauridae) and *Bactrosaurus* (Hadrosauridae) are discussed.

69 BROWN, BARNUM and SCHLAIKJER, E.M., 1940. The origin of ceratopsian horn-cores. American Museum Novitates, no. 1065, p. 1-7, illus., 6 refs.

It is suggested that the arching of the nasals in *Protoceratops* (Protoceratopsidae) represents the beginning of a nasal horncore in the ceratopsians.

70 BROWN, B. and SCHLAIKJER, E.M., 1940. The structure and relationship of *Protoceratops*. Annals of the New York Academy of Sciences, v. 40, p. 133-266, illus., 38 refs.

A complete comparative study of the skeleton of *Protoceratops andrewsi* (Protoceratopsidae) makes up the bulk of this article. A discussion of the eggs and integument of this species is also included. Maps are included of the route of the 1922 Asiatic Expedition and the locations of the principal specimens collected from the Djadokhta Fossil Field. The species of vertebrates known (as of 1940) from the Djadokhta Formation are listed.

71 BUTLER, P.M. and KIELAN-JAWOROWSKA, Z., 1973. Is *Deltatheridium* a marsupial? Nature, v. 245, p. 105-106.

The taxonomic placement of *Deltatheridium pretrituberculare* (Deltatheridiidae) and *Deltatheroides cretacicus* (Deltatheridiidae) from the Djadokhta Formation (?Coniacian or Santonian) and (?)Middle Campanian Barun Goyot Formation of Mongolia is discussed. It is concluded that the Deltatheridiidae should be classified as Theria of metatherian-eutherian grade.

72 CAMP, CHARLES L. and ALLISON, H.J., 1961. Bibliography of fossil

vertebrates 1949 - 1953. The Geological Society of America, Memoir 84, 532 pp.

73 CAMP, C.L., ALLISON, H.J. and NICHOLS, R.H., 1964. Bibliography of fossil vertebrates 1954 - 1958. The Geological Society of America, Memoir 92, 647 pp.

74 CAMP, C.L., ALLISON, H.J., NICHOLS, R.H. and McGINNIS, H., 1968. Bibliography of fossil vertebrates 1959 - 1963. The Geological Society of America, Memoir 117, 644 pp.

75 CAMP, C.L., NICHOLS, R.H., BRAJNIKOV, B., FULTON, E. and BACSKAI, J.A., 1972. Bibliography of fossil vertebrates 1964 - 1968. The Geological Society of America, Memoir 134, 1119 pp.

76 CAMP, C.L. and TAYLOR, D.N., 1942. Bibliography of fossil vertebrates 1934 - 1938. Geological Society of America, Special Paper 42, 663 pp.

77 CAMP, C.L. and VANDERHOOF, V.L., 1940. Bibliography of fossil vertebrates 1928 - 1933. Geological Society of America, Special Paper 27, 503 pp.

78 CAMP, C.L., WELLES, S.P. and GREEN, M., 1949. Bibliography of fossil vertebrates 1939 - 1943. Geological Society of America, Memoir 37, 371 pp.

79 CAMP, C.L., WELLES, S.P., and GREEN, M., 1953. Bibliography of fossil vertebrates 1944 - 1948. Geological Society of America, Memoir 57, 465 pp.

80 CARROLL, ROBERT L., 1988. *Vertebrate Paleontology and Evolution.* New York: W.H. Freeman and Sons, 698 pp., illus.

81 CASSILIANO, M.L. and CLEMENS, W.A., 1979. Symmetrodonta. *In* Mesozoic Mammals: The First Two-thirds of Mammalian History (Lillegraven, J.A., Keilan-Jaworoska, Z. and Clemens, W.A., editors). Berkeley: University of California Press, p. 150-161, 33 refs.

This article reviews the Symmetrodonta. *Manchurodon simplicidens* is provisionally placed in the family Amphidontidae, as the type speciman was lost in World War II. Originally described as Jurassic, it was probably of Early Cretaceous age. It is noted that Dashzeveg has reported an unnamed genus and species of ?Aptian or Albian age from Khoboor, near Guchin Us, Province of Arvaykher, MPR.

82 CHANG, CHI, 1932. Letter concerning the opposition of the Chinese National Committee for Preservation of Antiquities to the Central Asiatic Expeditions. Science, v. 76, p. 539.

This letter explains the position of the Chinese National Committee for the Preservation of Antiquities on the breakdown of relations between themselves and the American Museum of Natural History with regards to explorations in China. It is contained within a discussion article by Osborn (1932).

83 CHANG MIMAN: see ZHANG MIMAN

84 CHAO SHICHIN: see ZHAO XIJIN

85 CHAO T.: see ZHAO ZHIKUI

86 CHARIG, ALAN J., 1973. Jurassic and Cretaceous dinosaurs. *In* Atlas of Palaeobiogeography, (Hallum, A., editor). Amsterdam: Elsevier Scientific Publishing Company, p. 339-352, illus., 21 refs.

A superficial description of the morphology of Asian dinosaurs is given. Passing reference is made to Upper Cretaceous dinosaurs.

87 CHENG CHIACHIEN: see ZHENG JIAJIAN

88 CHINA, THE ZHEJIANG PROVINCIAL MUSEUM, SECTION OF GEOLOGY AND PALEONTOLOGY, 1976. New discoveries of Early Cretaceous fish fossils in the Jinhua Prefecture, Zhejiang Province. Vertebrata PalAsiatica, v. 14(3), p. 154-159, illus., 12 refs., (Chinese).

Lower Cretaceous

89 CHKHIKVADZE, V.M., 1976. The new data on the fossil turtles of Mongolia, China and eastern Kazakhstan. Akademiia Nauk Georgian SSR, Doklady, v. 82(3), p. 745-748, 14 refs., (Russian with English and Georgian summaries).

The classification of a variety of fossil turtles is redefined and clarified by the author, and he places the genera known from Mongolia, China and eastern Kazakhstan into the following families:

Meiolaniidae: *Yumenemys*
Sinemydidae(now Chelonia incertae sedis): *Sinemys*, *Manchurochelys*, *Hangaiemys* (now Fam. undesig.), *Kirgizemys*, *Yaxartemys* (now in Thalassemyidae).
Sinochelyidae(= Dermatemydidae): *Sinochelys* (*Scutemys*?), *Peishanemys*, *Heishanemys*(?).
Lindholmemydidae(= Dermatemydidae): *Lindholmemys*, *Tsaotanemys* (= *Mongolemys*), *Elkemys* (= *Mongolemys australis*).

90 CHKHIKVADZE, V.M., 1981. The origin of large-headed turtles. *In* General Problems in Paleobiology (Mchedlidze, G.A., Kobidze, L.K. and Bokeria, E.B., editors). Tbilisi, USSR: Izd. Metsniereba, p. 131-146, illus., 29 refs., (Russian with English summary).

Lower Cretaceous

91 CHKHIKVADZE, V.M. and SHUVALOV, V.F., 1980. On the origin of three-clawed turtles. Soobshcheniya Akademiia Nauk Gruzinskoy SSR, v. 100(2), Nov., p. 501-503, (Russian with English summary).

The turtle *Chariyonyx tajanikolaevae* gen. et sp. nov. (Sinaspideretidae[= Trionychidae]) from the bottom of the Upper Cretaceous at Khar Khutul, Mongolia, is described. It is a link between the Adocidae(= Dermatemydidae) and a group of soft-shelled turtles.

92 CHOW MINCHEN: see ZHOU MINGZHEN

93 CHUDINOV, P.K., 1966. Unique site of Late Cretaceous reptiles in Baian-Khongor Aimak. *In* Materials on Geology of the Mongolian People's Republic (Marinov, editor), Moscow: Nedra Press, p. 74-78, illus., (Russian).

Not seen

94 CIESLINSKI, STEFAN, 1962. Cretaceous Period and Cretaceous vertebrates of Mongolia. Przeglad Geologiczny, v. 3, p. 166-169, illus., 4 refs, (Polish).

The following Upper Cretaceous vertebrates are listed with their associated localities: *Gorgosaurus lancinator*(= *Tarbosaurus bataar*, Tyrannosauridae), *Paralligator gradilifrons* (Paralligatoridae), *Saurolophus angustirostris* (Hadrosauridae), *Tarbosaurus efremovi*(=*Tyrannosaurus baatar*, Tyrannosauridae), and *Tyrannosaurus baatar*(=*Tarbosaurus baatar*, Tyrannosauridae), collected from Nemegt, Altan Ula, Sheeregeen Gashoon, and Kagan Ula. *Protoceratops andrewsi* (Protoceratopsidae), *Syrmosaurus viminicaudus*(=*Pinacosaurus grangeri*, Ankylosauridae), and *Talarurus plicatospineus* (Ankylosauridae), are known from Bayn Dzak and Bayn Shireh. *Iguanodon orientalis* (Iguanodontidae)and *Psittacosaurus mongoliensis* (Psittacosauridaeidae), from the Lower Cretaceous, are also listed.

95 CLEMENS, WILLIAM A., 1970. Mesozoic mammalian evolution. *In* Annual Review of Ecology and Systematics (Johnston, R.F., Frank, P.W. and Michener, C.D., editors), v. 1, p. 357-390, 101 refs.

In this review article the Upper Cretaceous mammal fauna including *Deltatheridium* (Deltatheridiidae), *Deltatheroides* (Deltatheridiidae) and *Kennalestes* (Kennalestidae) from Bayn Dzak in Mongolia is briefly discussed.

96 CLEMENS, W.A., 1970. Mammalian evolution in the Cretaceous (abstract). Biological Journal of the Linnean Society, v. 2, p. 321., no refs.

Mammalian fauna in Mongolia is mentioned.

97 CLEMENS, W.A., 1971. Mammalian evolution in the Cretaceous. *In* Early Mammals (Kermack, D.M. and Kermack, K.A., editors). Zoological Journal of the Linnean Society, v. 50, suppl. 1, p. 165-180.

Mammalian evolution in the Cretaceous is discussed. Reference is made to the Asian fossil fauna, specifically *Kennalestes* (Kennalestidae), *Deltatheridium* (Deltatheridiidae), *Deltatheroides* (Deltatheridiidae) and *Zalambdalestes* (Zalambdalestidae).

98 CLEMENS, W.A., LILLEGRAVEN, J.A., LINSDAY, E.H. and SIMPSON, G.G., 1979. Where, when, and what - a survey of known Mesozoic mammal distribution. *In* Mesozoic Mammals: The First Two-thirds of Mammalian History (Lillegraven, J.A., Kielan-Jaworowska, Z. and Clemens, W.A., editors). Berkeley: University of California Press, p. 7-58, 214 refs.

A summary of all known Mesozoic mammal localities is presented. Faunal lists and locality maps are also included.

99 CLEMENS, W.A. and KIELAN-JAWOROWSKA, Z., 1979. Multituberculata. *In* Mesozoic Mammals: The First Two-thirds of Mammalian History

(Lillegraven, J.A., Kielan-Jaworowska, Z. and Clemens W.A., editors). Berkeley: University of California Press, p. 99-149, 120 refs.

This paper reviews the anatomy and systematics of the Multituberculata. Late Cretaceous mulituberculates from the Mongolian People's Republic which are discussed include:

> *Gobibaatar parvus(=Kryptobaatar dashzevegi)* (?Neoplagiaulacidae), from the Djadokhta Formation (?late Santonian and/or ?early Campanian) at Bayn Dzak; *Catopsalis catopsaloides, C. matthewi* and *Kampobaatar kuczynskii* (Taeniolabididae); *Buginbaatar transaltaiensis* (Bugeen Tsav (MPR)), *Bulganbaatar nemegtbaatarogobiensis* and *Kryptobaatar dashzevegi* (from the Djadokhta Formation), *Tugrigbaatar saichaenensis* (Toogreeg Beds), *Nemegtbaatar gobiensis* (Barun Goyot Formation) and an unnamed genus and species (Kielan-Jaworowska 1975), all from the Eucosmodontidae; *Chulsanbaatar vulgaris* (Chulsanbaataridae), from the Nemegt and Khulsan sites of the Barun Goyot Formation; and *Sloanbaatar mirabilis* (Sloanbaataridae), from the ?late Santonian and/or ?early Campanian of Bayn Dzak.

100 COCKERELL, T.D.A., 1924. Fossils in the Ondai Sair Formation, Mongolia. Bulletin of the American Museum of Natural History, v. 51, p. 129-144.

Lower Cretaceous

101 COLBERT E.M., 1945. The hyoid bones in *Protoceratops* and in *Psittacosaurus*. American Museum Novitates, no. 1301, p. 1-10, illus., 18 refs.

The hyoid bones in *Protoceratops* (Protoceratopsidae) are described for the first time and compared to those of *Psittacosaurus* (Psittacosauridae). From these fossils it appears that the hyoid bones in dinosaurs show a development similar to that in modern crocodiles.

102 COLBERT, EDWIN M., 1948. Evolution of the horned dinosaurs. Evolution, v. 2, p. 145-163, illus., 27 refs.

A brief description of the geographical distribution of *Protoceratops* (Protoceratopsidae) and *Pentaceratops* (Ceratopsidae) from the Upper Cretaceous Djadokhta Formation of Mongolia.

103 COOMBS JR., WALTER P., 1978. The families of the ornithischian dinosaur order Ankylosauria. Palaeontology, v. 21, part 1, p. 143 -170, illus., 94 refs.

The diagnostic features, distribution and evolution of the ankylosaurids are discussed. Asiatic material is mentioned.

104 COOMBS JR., W.P., 1980. Juvenile ceratopsians from Mongolia the smallest known dinosaur specimens. Nature, v. 283, p. 380-381, 10 refs.

Lower Cretacous

105 COOMBS JR., W.P., 1982. Juvenile specimens of the ornithischian dinosaur *Psittacosaurus*. Paleontology, v. 25(1), p. 89-107.

Lower Cretaceous

106 COX, BARRY, 1982. Review of Kemp, T.S., 1982. Mammal-like Reptiles and the Origin of Mammals. (London: Academic Press). Nature, v. 298(5871), p. 307.

Book review.

107 CROMPTON, A.W. and KIELAN-JAWOROWSKA, Z., 1978. Molar structure and occlusion in Cretaceous therian mammals. *In* Studies in the Development, Function and Evolution of Teeth (Butler, P.M. and Joysey, K.A., editors). London: Academic Press, p. 249-287, illus., 58 refs.

This article describes and discusses in great detail the structure and occlusion of Cretaceous Therian mammalian molars. Based on this information, tentative suggestions about the relationships and phylogeny of these Cretaceous mammals were made by the authors. They concluded that therian mammals appear to have had a world-wide distribution during the Lower Cretaceous, but during the Upper Cretaceous, marsupials seem to have evolved in North or South America, or Australia, whereas eutherians developed in Asia and migrated to North America and Europe.

Some functional interpretations of Cretaceous mammalian molars are also suggested, and changes in function in relation to structural modifications are discussed.

Upper Cretaceous Mongolian mammals which are discussed in some detail include the following:

Deltatheridium (Deltatheridiidae), ?Late Santonian to Middle Campanian
Asioryctes (Palaeoryctidae[?=Kennalestidae]), Campanian
Zalambdalestes (Zalambdalestidae), Santonian
Kennalestes (Kennalestidae), Santonian

Comparisons are made between the molars of Cretaceous mammals from Mongolia and North America.

108 DASHZEVEG, DEMBERELYIN, 1963. Dinosaur eggs. Priroda, no. 9, p. 100, 4 refs., (Russian).

109 DASHZEVEG, D., 1975. New primitive therian from the Early Cretaceous of Mongolia. Nature, v. 256, p. 402-403, 8 refs.

Lower Cretaceous

110 DASHZEVEG, D., 1979. *Arguimus khosbajari* gen. n., sp. n. (Peramuridae, Eupantotheria) from the Lower Cretaceous of Mongolia. Acta Palaeontologica Polonica, v. 24, p. 199-204, illus., 12 refs.

Lower Cretaceous

111 DASHZEVEG, D. and KIELAN-JAWOROWSKA, Z., 1984. The lower jaw of an aegialodontid mammal from the Early Cretaceous of Mongolia. *In* Vertebrate structure and histology, (Patterson, C., editor), Zoological Journal of the Linnean Society, v. 82(1-2), p. 217-227, illus., 45 refs.

Not seen

112 DE CHARDIN, PIERRE TEILHARD, 1932. Les resultats scientifiques de l'Expedition Centre-Asie. Terre, Air, Mer, v. 58, p. 379-380, no refs.

113 DE CHARDIN, P.T., and LEROY, P., 1942. Chinese fossil mammals. Publications de L'Institute de Geobiologie, v. 8, p. 1-142.

This is a complete bibliography of the mammalian palaeontogy of China as of 1942 (Mongolia and Manchuria are included). Four references are given for Upper Cretaceous mammals (included in this bibliography).

114 DIETRICH, W.O., 1928. Review of: Andrews, R. C., 1927. Auf der fahrte des Urmenschen. Abenteur und Entdeckungen dreier Expeditionen in die Mongolische Wuste. Neus Jahrbuch fur Mineralogie, Geologie, und Palaontologie, 1928. Abteilung B: Centralblatt fura Mineralogie, Geologie, und Palaontologie, p. 61-63, no refs.

Book review.

115 DIETRICH, W.O., 1928. Fort schritte der Saugetierpalaeontologie. Die Entdeckungen der Americaner in der Mongolei. Sitzungsberichte der Gesellschaft Naturforschender freunde zu Berlin, 1928, p. 45-79, illus., no refs.

116 DODSON, PETER, 1976. Quantitative aspects of relative growth and sexual dimorphism in *Protoceratops*. Journal of Paleontology, v. 50(5), p. 929-940, illus., no refs.

The skulls of 24 *Protoceratops andrewsi* (Protoceratopsidae) from the Upper Cretaceous Djadokhta Formation of Mongolia were subjected to biometric analysis. The frill of *Protoceratops* was determined to be sexually dimorphic by principal coordinate analysis.

117 DONG ZHIMING, 1973. Cretaceous stratigraphy of the Urho district, Junggar Basin. *In* Reports of the Paleontological Expedition to Xinjiang(II): The Pterosaurian Fauna from Urho, Xinjiang. China: Academia Sinica, Memoirs of the Institute of Vertebrate Paleontology and Paleoanthropology. no. 11, p. 1-7, illus., (Chinese).

Lower Cretaceous

118 DONG ZHIMING, 1973. Dinosaurs from Urho *In* Reports of the Paleontological Expedition to Xinjiang(II): The Pterosaurian Fauna from Urho, Xinjiang. China: Academia Sinica, Memoirs of the Institute of Vertebrate Paleontology and Paleoanthropology. no. 11, p. 45-52, illus., (Chinese).

Lower Cretaceous

119 DONG ZHIMING, 1973. A fossil carnosaur tooth from Kuga County, the Xinjiang. Vertebrata PalAsiatica, v. 2(2), September, p. 217, illus., no refs., (Chinese).

Not seen - unavailable through ILL

120 DONG ZHIMING, 1973. Vertebrate fossils from the Tugulu Series at Delun Mountain, Xiazijie. *In* Reports of the Paleontological Expedition to Xinjiang (II): The Pterosaurian Fauna from Urho, Xinjiang. China: Academia Sinica, Memoirs of the Institute of Vertebrate Paleontology and Paleoanthropology, no. 11, p. 53, (Chinese).

Lower Cretaceous

121 DONG ZHIMING, 1974. Fossil crocodylians from the Xinjiang. Vertebrata PalAsiatica, v. 12(3), July, p. 187-189, illus., (Chinese).

The author describes a number of crocodile fossils from Eocene, Jurassic and Cretaceous deposits collected in 1963 and 1964. From the Cretaceous(?), five teeth (Paralligatoridae) were collected in the Junggar

Basin of Changji County, Xinjiang.

122 DONG ZHIMING, 1976. A compilation of the genera of the lower quadruped fossils of China. Vertebrata PalAsiatica, v. 14(2), April, p. 131-133, no refs., (Chinese).

This article lists all lower quadruped fossils known from China. A significant portion of the species mentioned are Upper Cretaceous dinosaurs and other reptiles. No other information is included.

123 DONG ZHIMING, 1977. Fossil dinosaurs from the Turpan Basin. Vertebrata PalAsiatica, v. 15(1), January, p. 59-66, illus., 10 refs., (Chinese with English summary).

A variety of fossils were collected from the Upper Cretaceous and Upper Jurassic of the Turpan Basin, Xinjiang, in 1964 to 1966. From the Upper Cretaceous Subashi Formation, the following fossils were found, and are briefly described in the article:

Shanshanosaurus huoyanshanesis gen. et sp. nov.
(Shanshanosauridae fam. nov.)
Nemegtosaurus pachi sp. nov. (Diplodocidae)
Tarbosaurus sp. (Dryptosauridae [=Tyrannosauridae])
Ankylosauria indet.
Mongolemys turfanensis (Dermatemydidae)
Oolithes speroides

The small theropod *S. huoyanshanesis* gen. et sp. nov. is described in detail, and probably represents the new family noted above.

124 DONG ZHIMING, 1978. A pachycephalosaur from the Wangshih Formation in Laiyang County, Shandong Province. Vertebrata PalAsiatica, v. 16(4) Oct., p. 225-228, illus., (Chinese with English summary).

The small pachycephalosaur, *Micropachycephalosaurus hongtunganensis*, gen. et sp. nov. (?Pachycephalosauridae, ?Homalocephalidae) from the Upper Cretaceous (Campanian) Wangshih Formation, at Laiyang, Shandong is described. Cranium shape (rough dome with extensive shelf vs. flat roof) is used as a taxonomic feature to separate the Pachycephalosauria into two families, Pachycephalosauridae and Homalocephalidae.

125 DONG ZHIMING, 1979. On Cretaceous dinosaurs of south China. Mem. Mesozoic Red Beds of South China, p. 342-350.

Not seen

126 DONG ZHIMING, 1980. The dinosaurian faunas of China and their stratigraphic distribution. Journal of Stratigraphy, v. 4(4), p. 256-263, illus., 12 refs.

The Upper Cretaceous dinosaur-containing strata and locations in China are: Wangshih Series in Shandong Province, Erliandabu(= Iren Dabasu) Group in Inner Mongolia, Nanxiong Formation in Guangdong Province, Subashi Group in the Turpan Basin of Xinjiang Autonomous Region, Zhengyan Group at Qianjiang in Sichuan Province, Laijia Formation in East Zhejiang Province, Majiachun Group in the Xishan Basin of Henan Province and the Yuliangze Formation in the Jiayin district of Heilongjiang Province.

Upper Cretaceous dinosaur fossils have also been reported from other locations in Gansu, Shanxi, Heilongjiang, Zhejiang, Henan, Anhui, Jiangxi, Hunan and Sichuan Provinces, as well as Ningxia and Inner Mongolia Autonomous Regions.

The author describes the distribution, lithology, epoch and fossils of the Erliandabu(= Iren Dabasu) Group, Wangshih Series, Nanxiong Formation and the Subashi Group. The fossils of these groups are compared to each other and some foreign fossils.

The following Upper Cretaceous dinosaurs are mentioned in association with their locations and formations:

Ornithomimus (=*Archaeornithomimus*) asiaticus (Ornithomimidae),
Mandschurosaurus (=*Gilmoreosaurus*) *mongoliensis* (Hadrosauridae),
Bactrosaurus johnsoni (Hadrosauridae),
Chilantaisaurus tashuikouensis (Theropoda, incerta sedis),
Alectrosaurus olsoni (Tyrannosauridae),
Tsintaosaurus spinorhinus, *Tanius sinensis*, *T. chingkankouensis*(=*T. sinensis*), *Shandongosaurus giganteus*, *Lambeosaurus*, *Microhadrosaurus*, *Anatosaurus* and *Edmontosaurus* (Hadrosauridae),
Nanhungochelys(sic) *wachingensis* (?Nanshiungchelyidae [Chelonia incertae sedis]),
Shanshanosaurus huoyuishanensis (Shanshanosauridae),
Nemegtosaurus pachi (Diplodocidae),
Tyrannosaurus cf. *rex* and *Tarbosaurus* sp. (Tyrannosauridae),
Mongolemys turfanensis (Dermatemydidae),
Oolithes irenensis, *O. elongatus*, *O. spheriodes*, *O. megadermus*, *O. rugustus*,*O. nanshingensis*.

127 DONG ZHIMING, ZHOW SHIWU and ZHANG YIHONG, 1983. The dinosaurian remains from Sichuan Basin, China. Palaeontologia Sinica, (Series C, no. 23), no. 162, p. 139-145.

Jurassic - - Lower Cretaceous

128 DREVERMANN, F., 1927. Expedition des American Museum of Natural History in Zentral Asien. Natur und Museum, v. 58, p. 22-31, illus., no refs.

129 DU, H.C., 1950. The discovery of the Cretaceous herrings from Linhai, Zhejiang. Geol. Rev., China, v. 15(4-6), p. 185-193, (Chinese).

Not seen - unavailable through ILL

130 EFIMOV, M.B., 1975. Champsosaurs of the Lower Cretaceous of Mongolia. *In* Fossil Fauna and Flora of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 2, p. 84-163, (Russian).

Lower Cretaceous

131 EFIMOV, M.B., 1975. Late Cretaceous crocodiles of Soviet Central Asia and Kazakhstan. Paleontological Journal, v. 9(3), p. 417-420, illus.

USSR

132 EFIMOV, M.B., 1976. The oldest crocodile on Soviet territory. Paleontological Journal, v. 10(1), p. 115-117, illus.

USSR

133 EFIMOV, M.B., 1978. Review of the fossil crocodiles of the USSR (abstract). Moskovskoye Obshchestvo Ispytateley Prirody, Byulleten', Otdel Geologicheskiy, v. 53(3), June, p. 157, (Russian).

USSR

134 EFIMOV, M.B., 1979. *Tchoira* (Champsosauridae) of the Early Cretaceous of Khamarin-Khural, MPR. *In* Mesozoic and Cenozoic Fauna of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 8, p. 56-57, (Russian with English summary).

Lower Cretaceous

135 EFIMOV, M.B., 1981. New paralligatorids from the Lower Cretaceous of Mongolia. *In* Fossil Vertebrates of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 15, p. 26-28, illus., (Russian with English summary).

Lower Cretaceous

136 EFIMOV, M.B., 1983. Champsosaurids of Central Asia. *In* Fossil Reptiles of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 24, p. 67-75, illus., 20 refs., (Russian with English summary).

This article reviews the champsosaurids of Asia and dsecribes some new forms.
(Annotation from English summary by journal)

137 EFIMOV, M.B., 1983. Revision of fossil crocodiles from Mongolia. *In* Fossil Reptiles of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 24, p. 76-96, illus., 17 refs.

This article reviews the fossil crocodiles of Mongolia. The new family Shamosuchidae(=Paralligatoridae) fam. nov., two new subfamilies in the Gobiosuchidae and a new genus in the family Crocodylidae are established.
(Annotation from English summary by journal)

138 EFREMOV, I.A., 1932. Dinosaurs in the red beds of Middle Asia (East Turkestan). Trudy Paleontologicheskii Instituta, v. 1, p. 217-221, (Russian with English summary).

USSR

139 EFREMOV, I.A., 1933. Two fields of death of past geological epochs. Priroda, no. 7, p. 61-63, no refs., (Russian).

USSR

140 EFREMOV, I.A., 1944. The dinosaur horizons of Central Asia and some stratigraphical problems. Bulletin de l'Academie des Sciences de l'URSS, Serie Geologique, no. 3(1944), p. 40-58, illus., 8 refs.

USSR

141 EFREMOV, I.A., 1948. The first Mongolian Paleontological Expedition of the Academy of Sciences of the USSR. Akademia Nauk SSSR, Vestnik, v. 18(1), p. 47-58, no refs., (Russian).

This paper is essentially the same as Efremov (1949).

142 EFREMOV, I.A., 1949. The preliminary results of the work of the 1st Mongolian Paleontological Expedition of the Academy of Sciences, USSR, 1946. Contribution to geology and paleontology. Akademiia Nauk SSSR. Trudy Mongolskaia Komissiia, v. 38., p. 5-28, no refs., (Russian).

A preliminary report is given on the material found at the following localities by the First Soviet Paleontological Expedition to the Mongolian People's Republic in 1946:

Algoy Ulan Tsav: Sauropoda (excellent condition).
Bayn Dzak: dinosaur eggs, skulls of Cretaceous mammals and *Protoceratops* (Protoceratopsidae), (weathered material).
Ulan Osh: Dinosauria (some whole skeletons).
Nemegt: Eggs of *Protoceratops* (Protoceratopsidae), the remains of fish, turtles, crocodiles, sauropods, hadrosaurs, carnosaurs and small dinosaurs.
Khamarin Khural: sauropods, hadrosaurs (whole skeletons in good condition).
Bayn Shireh: Ceratopsians (whole skeletons), fish and crocodiles.

143 EFREMOV, I.A., 1953. Some questions from the study of dinosaurs. Contributions from the Mongolian expeditions of the Academy of Sciences, USSR. Priroda, no. 6, p. 26-37, illus., no refs., (Russian).

This article discusses the evolution of dinosaurs, relying heavily on material collected in Mongolia. It examines two lines of development, bipedalism and quadrapedalism, and discusses the characteristics specific to each group. Sauropods are examined in some depth. It is suggested that dinosaurs lived in specific zones rather then in complex interacting groups as is the current view. Reproduction is discussed. The function and evolution of different body parts is analyzed.

144 EFREMOV, I.A., 1954. A few remarks concerning the problems of dinosaur development. Akademiia Nauk SSSR, Trudy Paleontologicheskii Instituta, v. 48, p. 125-141, illus., 8 refs., (Russian).

A variety of issues concerning dinosaur evolution are covered in this paper including bipedalism, quadrupedalism, environmental adaptions, feeding patterns, zonal distribution and reproduction. Examples from Mongolia include sauropods from Algoy Ulan Tsav (Lower Cretaceous) and ankylosaurs such as *Syrmosaurus*(=*Talarurus*, Ankylosauridae) from Bayn Dzak and Bayn Shireh (Upper Cretaceous) in the eastern Gobi. These Mongolian faunas are discussed in relation to dinosaur associations found at Upper Cretaceous localities in North America.

145 EFREMOV, I.A., 1954. Paleontological research in the Mongolian People's

Republic. Akademiia Nauk SSSR, Trudy Mongolskaia Komissiia, v. 59, p. 3-32, illus., 5 refs., (Russian).

146 EFREMOV, I.A., 1955. The preservation of dinosaurs in Nemegt (southern Gobi, Mongolia). Voprosy Geologii Azii, v. 2, p. 789-809, illus., 9 refs., (Russian).

This article discusses the large occurrences of dinosaurs found in the Nemegt Basin in 1946 by the Mongolian Paleontological Expedition of the Akademii Nauk SSSR. The most common dinosaurs found were *Saurolophus* (Hadrosauridae). This species also yielded the most complete skeletons. Whole skeletons were much rarer then large accumulations of individual bones (bonebeds). These bonebeds are discussed with regards to number and completeness of specimens in a site, degree of fossilization and rock type.

The Nemegt locations are compared to Tendaguru and the Lance Formation. It is concluded that the Nemegt locations are specific formations and do not reflect the general composition of the Upper Cretaceous fauna of Mongolia.

147 EFREMOV, I.A., 1957. On taphonomy of fossil land vertebrate faunas of Mongolia. Vertebrata PalAsiatica, v. 1(2), p. 83-102, (Russian with English and Chinese summaries).

This paper discusses the results of the Soviet-Mongolian Paleontological Expeditions from 1946-1949 and the prospects of locating fossil material in various parts of Asia in the future.

148 EFREMOV, I.A., 1963. The prospects of palaeontological investigations in Mongolia. *In* Materialy po Geology MNR (Martinson, N.N., editor). Moscow: Gostoptekhizdat, p. 82-92, 15 refs., (Russian).

149 ELZANOWSKI, ANDRZEJ, 1974. Preliminary note on the paleognathus bird from the Upper Cretaceous of Mongolia. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part V. Palaeontologica Polonica, no. 30, p. 103-109, illus., 8 refs.

Gobipteryx minuta gen. et sp. nov. (Gobipterygidae, fam. nov.), a supposed palaeognathus bird from the Upper Cretaceous (?Campanian) Barun Goyot Formation of the Gobi Desert is described on the basis of a single skull. The new family Gobipterygidae and order Gobipterygiformes are established.

150 ELZANOWSKI, A., 1976. Palaeognathus bird from the Cretaceous of Central Asia. Nature, v. 264(5581), Nov. 4, p. 51-53, illus., 17 refs.

The discovery of the second *Gobipteryx minuta* (Gobipterygidae) skull from the (?)Campanian of the Barun Goyot Formation is reported, making *Gobipteryx* the oldest known palaeognathus bird.

151 ELZANOWSKI, A., 1977. Skulls of *Gobipteryx* (Aves) from the Upper Cretaceous of Mongolia. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part VII. Palaeontologia Polonica, no. 37, p. 153-165, illus.

Gobipteryx minuta (Gobipterygidae) skulls from the (?)Middle Campanian Barun Goyot Formation in Khulsan are described and misinterpretations from the author's preliminary description are corrected. *Gobipteryx* is established as a palaeognathous bird.

152 ELZANOWSKI, A., 1981. Embryonic bird skeletons from the Late Cretaceous of Mongolia. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part IX. Palaeontologia Polonica, no. 42, p. 147-149, 53 refs.

Seven specimens of highly advanced embryos of *Gobipteryx minuta* from the Upper Cretaceous (?Middle Campanian) of Khermeen Tsav I, Mongolia, are described.

153 ELZANOWSKI, A., 1983. Birds in Cretaceous ecosystems. Acta Palaeontologica Polonica, v. 28(1-2), p. 75-92.

This article discusses the reasons for the rarity of birds in the Cretaceous record. Some reference is made to Mongolia and China.

154 ENDO, R. and T. SHIKIMA, 1942. Mesozoic reptilian fauna in the Jehol mountainland, "Manchoukuo." Bulletin Cent. Natl., Mus. Manchuria, v. 3, p. 1-20.

Not seen

155 FOX, RICHARD C., 1977. Notes on the definition and relationships of the Late Cretaceous insectivore *Gypsonictops* Simpson. Canadian Journal of Earth Science, v. 14(8), p. 1823-1831.

The most complete maxilla known of the insectivore *Gypsonictops hypocamus* (Lance Formation, Wyoming) is described. Relationships of North American and Mongolian horizons are discussed relative to the mammalian fauna.

156 FOX, R.C., 1978. Upper Cretaceous terrestrial vertebrate stratigraphy of the Gobi Desert (Mongolian People's Republic) and western North America. *In* Western and Arctic Biostratigraphy (Stelck, C.R., *et al*, editors). Geological Association of Canada, Special Paper, no. 18, p. 577-594, illus., (French summary).

A comparison is presented between the Upper Cretaceous horizons of the Gobi Desert and western North America on the basis of the terrestrial vertebrates. It is concluded that the Djadokhta and Barun Goyot Formations are of Campanian age.

157 GALTON, PETER M, 1982. Review of Kemp, T.S.: Mammal-like Reptiles and the Origins of Mammals, London: Academic Press, 1982. Systematic Zoology, v. 31(4), p. 526-527.

Book review.

158 GAO HONGXIANG, 1975. Subdivision of the "Red Beds" in Chaling Basin, Hunan Province. Vertebrata PalAsiatica, v. 13(2), April, p. 89-95, illus., 21 refs., (Chinese with English summary).

159 GAO SHANGYU, LI BAOSHENG and DONG GUANGRONG, 1981. Fossil footprints from the Chabu area of the Inner Mongolia Autonomous Region. Vertebrata PalAsiatica, v. 19(2), April, p. 193, illus., no refs., (Chinese).

Several groups of fossil footprints of dinosaurs were discovered on the bedding surface of Lower Cretaceous strata in the Chabu area of Ertuoke Qi, Inner Mongolia.

160 GAUDANT, J., 1966. Les Actinopterygiens du Mesozoique continental d'Asie centrale et orientale et le probleme de l'origine des teleosteens. Bull. Soc. Geol. de France, v. 8, p. 107-113.

Jurassic - Lower Cretaceous

161 GILMORE, CHARLES WHITNEY, 1931. Fossil turtles of Mongolia. Bulletin of the American Museum of Natural History, v. 59, p. 213-257, illus., no refs.

The Upper Cretaceous turtles described from Mongolia are: Dermatemydid, gen. indet. (Dermatemydidae) from Djadokhta; Trionychid, gen. indet. (Trionychidae) from Iren Dabasu; and *Adocus* sp. (Dermatemydidae) from Dohoin Usu.

162 GILMORE, C.W., 1933. On the dinosaurian fauna of the Iren Dabasu Formation. Bulletin of the American Museum of Natural History, v. 67, p. 23-78, 21 refs.

The results obtained from a study of all dinosaurian material collected from the Iren Dabasu Formation by the Asiatic Expeditions of the American Museum of Natural History are presented. The two primary deposit sites were seven and eight miles east of the Iren Dabasu telegraph station. The age of the Iren Dabasu Formation is discussed and determined to be Upper Cretaceous. A map is included of the more important fossil sites.

The following fauna are discussed:

Ornithomimus(=*Archaeornithomimus*) *asiaticus* sp. nov. (Ornithomimidae), *Alectrosaurus olseni* gen. et sp. nov. (Dryptosauridae[=Tyrannosauridae]), Dromaeosaurinae gen. and sp. indet. (Dromaeosauridae), *Bactrosaurus johnsoni* (Hadrosauridae) , *Saurolophus krischtofovici*(=*S. angustirostris*, Hadrosauridae), *Mandschurosaurus*(=*Gilmoreosaurus*) *mongoliensis* (Hadrosauridae), *Trachodon amurense*(*Mandschurosaurus amurensis*) (Hadrosauridae), and Nodosauridae(=Ankylosauridae) gen. and sp. indet.

Several other Mongolian genera are mentioned in the discussions of the above fauna.

163 GILMORE, C.W., 1933. Two new dinosaurian reptiles from Mongolia with notes on some fragmentary specimens. American Museum Novitates, no. 679, p. 1-20, 8 refs.

Pinacosaurus grangeri gen. et sp. nov. (Nodosauridae, now in Ankylosauridae) from the Upper Cretaceous Djadokhta Formation at Shabarakh Usu (=Bayn Dzak) Mongolia and *Mongolosaurus haplodon* gen. et sp. nov. (?Diplodocidae[Sauropoda incertae sedis]), from the Lower Cretaceous of Hu Khung Ulan, Mongolia are described. Fragments of specimens from the Deinodontidae, Ornithomimidae, Hadrosauridae and Ceratopsidae are described. A chart of the chronological distribution of the Mongolian dinosaurs is included.

164 GILMORE, C.W., 1943. Fossil lizards from Mongolia. Bulletin of the American Museum of Natural History, v. 81(4), p. 361-384, 12 refs.

This article is the first description of Upper Cretaceous lizards from Mongolia based on material collected from the Djadokhta Formation at Shabarakh Usu (=Bayn Dzak) by the Central Asiatic Expedition of the American Museum of Natural History in 1923 and 1925. The fragmentary material described includes:

Macrocephalosaurus ferrugenous gen. et sp. nov. (Teiidae)
Conicodontosaurus djadochtaeusis gen. et sp. nov., (?Agamidae

[Lacertilia incertae sedis]), *Mimeosaurus crassus* gen. et sp. nov., (Chamaeleontidae[=Agamidae]), *Telmasaurus grangeri* gen. et sp. nov., (Varanidae), and *Isodontosaurus gracilis* gen. et sp. nov., (?Anguidae[Lacertilia incertae sedis]).

Gilmore also describes several sauria indeterminata, one of which, AMNHGG48, has since been identified as *Adamisaurus magnidentatus* (Adamisauridae[Teiidae]) by Sulimski, 1972.

165 GRABAU, A.W., 1923. Cretaceous fossils from Shandong. Bulletin of the Geological Survey of China, v. 5, part 2, p. 143-181, illus., 10 refs.

166 GRADZINSKI, R., 1970. Sedimentation of dinosaur-bearing Upper Cretaceous deposits of the Nemegt Basin, Gobi Desert. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part II. Palaeontologia Polonica, no. 21, p. 147-229, illus., 171 refs.

The Upper Cretaceous (?Campanian-Maastrichtian) Lower and Upper Nemegt Beds (Barun Goyot and Nemegt Formations) of the Nemegt Basin are discussed. Dinosaur remains are largely confined to the Nemegt Formation. Nearly complete skeletons are common, while single bones and fragments are rare. The mode of occurrence of specific specimens is dicussed. Quarry illustrations are given for *Tarbosaurus* sp. (Tyrannosauridae) (Tsagan Khushu and Nemegt), and *Deinocheirus mirificus* (Deinocheiridae) (Altan Ula).

The distribution state of preservation and burial conditions of dinosaur material is discussed. Based on the geological evidence presented in this paper, the author postulates that the dinosaur remains were buried either in situ or close to the place of death. This differs from the earlier conclusions of Efremov, 1970, who suggested that the dinosaurian remains had undergone long distance transportation before burial.

Other organic remains from the Nemegt Basin (tortoise, *Paralligator*, invertebrates) and trace fossils are also mentioned.

167 GRADZINSKI, R. and JERZYKIEWICZ, T., 1974. Dinosaur- and mammal-bearing aeolian and associated deposits of the Upper Cretaceous in the Gobi Desert (Mongolia). Sedimentary Geologist, v. 12(4), p. 249-278, illus.

168 GRADZINSKI, R., KIELAN-JAWOROWSKA, Z. and MARYANSKA, T., 1977. Upper Cretaceous Djadokhta, Barun Goyot and Nemegt Formations of Mongolia, including remarks on previous subdivisions. Acta Geologica Polonica, v. 27(3), p. 281-318, 111 refs.

The Upper Cretaceous Djadokhta, Barun Goyot and Nemegt Formations are discussed and their diagnoses are refined. Columnar sections of type and reference localities are given. Complete lists of fossils described from these formations as well as from other Upper Cretaceous beds (Toogreeg, Alag Teg, the Red Beds of Khermeen Tsav I and II, the upper white beds of Khermeen Tsav, and Barun Tsav) of the same region are given.

The index fossil assembleges for Djadokhta, Barun Goyot, and Nemegt Formations are given as:

Djadokhta:

Kryptobaatar dashzevegi (Eucosmodontidae), *Catopsalis matthewi* (Taeniolobididae), *Kennalestes gobiensis* (Kennalestidae), *Zalambdalestes lechei* (Zalambdalestidae), ?*Protoceratops kowlowskii* (Protoceratopsidae), and *Pinacosaurus grangeri* (Ankylosauridae).

Barun Goyot:

Nemegtbaatar gobiensis (Eucosmodontidae), *Catopsalis catopsaloides* (Taeniolabidae), *Asioryctes nemegetensis* (Palaeoryctidae[?=Kennalestidae]), *Barunlestes butleri* (Zalambdalestidae), ?*Protoceratops kowlowskii* (Protoceratopsidae), *Saichania chuisanensis* (Ankylosauridae), *Macrocephalosaurus chuisanensis* (Agamidae[=Teiidae]), and *Macrocephalosaurus gilmorei* (Agamidae[=Teiidae])

Except for *Deltatheridium pretrituberculare* (Deltatheridiidae), represented in the Djadokhta and Barun Goyot Formations by different subspecies, no other species are found in common between any two formations. A comparison of the Late Cretaceous dinosaur and mammal faunas of North America and Asia shows that the only genera common to both are *Saurolophus* (Hadrosauridae) and *Catopsalis* (formerly *Djadochtatherium*) (Taeniolabididae). The best estimate of formations' ages are: Djadokhta=?upper Santonian and/or ?lower Campanian; Barun Goyot=?middle Campanian; Nemegt=?upper Campanian and ?lower Maastrichtian.

169 GRANGER, WALTER, (no date). Mongolia, 1923, Third Asiatic Expedition, Field Record of Fossils. New York: The American Museum of Natural History, Department of Vertebrate Paleontology, (manuscript).

Not seen

170 GRANGER, W., 1931. Camp life on the Gobi Desert. Natural History, v. 31, p. 359-373, illus., no refs.

Non-technical.

171 GRANGER, W., 1936. The story of the dinosaur eggs. Natural History, v. 38, p. 21-25, illus., no refs.

A popular accout of the discovery of the first *Protoceratops* (Protoceratopsidae) skull and the first dinosaur eggs. A photograph of the first dinosaur nest is included.

172 GRANGER, W. and GREGORY, W.K., 1923. *Protoceratops andrewsi*, a pre-Ceratopsian dinosaur from Mongolia. American Museum Novitates, no. 72, p. 1-9, no refs.

The type specimen of *Protoceratops andrewsi* (Protoceratopsidae, fam. nov.) is described. It consists of a skull lacking the occiput. The skull was discovered on the Kweiwa-ting trail, east of Arts Bogd (Artsa Bogda), Mongolia. The family Protoceratopsidae is defined. The appendix gives the structural relationships of the *Protoceratops* beds.

173 GREGORY, J.T., BACSKAI, J.A., BRAJNIKOV, B. and MUNTHE, K., 1973. Bibliography of fossil vertebrates 1969 - 1972. The Geological Society of America, Memoir 141, 733 pp.

174 GREGORY, J.T., BACSKAI, J.A. and SHKURKIN, G.V., 1981. Bibliography of fossil vertebrates 1978. The American Geological Institute, 380 pp.

175 GREGORY, J.T., BACSKAI, J.A. SHKURKIN, G.V. and BRYANT, L.J., 1981. Bibliography of fossil vertebrates 1979. The American Geological Institute, 442 pp.

176 GREGORY, J.T., BACSKAI, J.A. SHKURKIN, G.V. and BRYANT, L.J., 1983. Bibliography of fossil vertebrates 1980. The American Geological Institute, 471 pp.

177 GREGORY, J.T., BACSKAI, J.A. SHKURKIN, G.V. and WINANS, M.C., 1984. Bibliography of fossil vertebrates 1981. The Society of Vertebrate Paleontology, 564 pp.

178 GREGORY, J.T., BACSKAI, J.A. SHKURKIN, G.V. and WINANS, M.C., 1985. Bibliography of fossil vertebrates 1982. The Society of Vertebrate Paleontology, 614 pp.

179 GREGORY, WILLIAM K., 1927. Missing links of the Gobi Desert. How a handful of fossils has filled a former gap in the evolutionary tree.

Scientific American, v. 136(4), p. 231-232, no refs. [Also in: Literary Digest, v. 93(4), p. 15-16.]

A popular account of the discovery of Cretaceous mammals in the Gobi Desert. A photograph and a diagram of the skulls of these mammals are included but not identified.

180 GREGORY, W.K., 1927. Gaps in the Mongolian life record. Science Monthly, v. 24, February, p. 169-181, illus., no refs.

This article is a discussion of vertebrate evolution in Mongolia based on the fossils collected by the Central Asiatic Expeditions. Most of the article describes the development of ornithischian dinosaurs, and relies heavily on the Lower Cretaceous ***Protoceratops*** (Protoceratopsidae) and ***Psittacosaurus*** (Psittacosauridae) material collected by the American Museum of Natural History. ***Oviraptor*** (Oviraptoridae), ***Velociraptor*** (Dromaeosauridae), and ***Saurornithoides*** (Troodontidae) are other Mongolian dinosaurs briefly mentioned. This semi-scientific article concludes with a discussion of the relationships between Asian and North American dinosaurs.

181 GREGORY, W.K. and MOOK, C.C., 1925. On *Protoceratops*, a primitive ceratopsian dinosaur from the Lower Cretaceous of Mongolia. American Museum Novitates, no. 156, p. 1-9, 27 refs.

Protoceratops andrewsi (Protoceratopsidae) is described highlighting the post-cranial material. The definition of the family Protoceratopsidae is extended. Its differences to other ceratopsian genera, including ***Protiguanodon*** (Psittacosauridae) and ***Psittacosaurus*** (Psittacosauridae), are discussed.

182 GREGORY, W.K., and SIMPSON, G.G., 1926. Cretaceous mammal skulls from Mongolia. American Museum Novitates, v. 225, 20 pp., no refs.

The following mammalian fauna known from the Djadokhta Formation (in 1926) are discussed: ***Djadochtatherium(=Catopsalis) matthewi*** (Taeniolabididae), ***Deltatheridium pretuberculare***, ***Deltatheroides cretcicus***, ***Hyotheridium dobsoni***, (Deltatheridiidae) and ***Zalambdalestes lechei*** (Zalambdalestidae).

183 GROMOV, U.I. (editor), 1954. A review of the work on paleontology in the Mongolian People's Republic. Akademiia Nauk SSSR. Trudy Mongoloskaia Komissiia, v. 59, p. 1-53, (Russian).

Articles cited separately.

184 GROMOVA, V.I., 1968. Mammals. *In* Fundamentals of Paleontology (Orlov, Yu.A., editor), English edition, v. 13. Jerusalem: Israel Program for Scientific Translations, 585 pp.

A comprehensive survey of all fossil mammals known from the USSR, Mongolia and northern China, including Upper Cretaceous forms.

185 GU ZHIWEI, 1982. Note on the check value of marine fossil beds for the age-dating of non-marine Mesozoic fossils in China. Acta Palaeontologica Sinica, v. 21(1), p. 19-27, 53 refs., (Chinese with English summary).

This article is a discussion of the accuracy of dating non-marine fossil beds, and suggests marine beds should be used for age correlations. The Upper Cretaceous Nenjiang Formation from the Sunghuachiang-Liaoho Plain of northeastern China is used as an example.

186 HAAS, GEORGE, 1955. The jaw musculature in *Protoceratops* and in other ceratopsians. American Museum Novitates, no. 1729, 24 pp., 12 refs.

Peculiarities of the jaw musculature of the Mongolian *Protoceratops* (Protoceratopsidae) are discussed in order to gain an idea of the muscular structure.

187 HE XINLU, 1984. The vertebrate fossils of Sichuan. Sichuan Scientific and Technological Publishing House, 168 p., illus., refs., (Chinese).

Not seen

188 HOFFSTETTER, R., 1953. Les sauriens ante-cretaces. Bulletin de la Musee d'Histoire Naturelle, v. 25, p. 345-352, illus.

Lower Cretaceous

189 HOU LIANHAI, 1977. A primitive Pachycephalosauria from Anhui, China. Vertebrata PalAsiatica, v. 15(3), p. 198-202, 10 refs., (Chinese with English summary).

Wannanosaurus yansiensis gen. et sp. nov., (?Pachycephalosauridae, ?Homalocephalidae) from the Upper Cretaceous Xiaoyan Formation of Anhui Province, is described from several bones.

190 HOU LIANHAI and LIN ZHICHENG, 1984. A new fossil bird from Lower Cretaceous of Gansu and early evolution of birds. Scientia Sinica, Series

B, v. 27(12), p. 1296-1303, illus.

Lower Cretaceous

191 HOU LIANHAI, YE XIANGKUI and ZHAO XIJIN, 1975. Fossil reptiles from Fusui County, the Guangxi Zhuangzu Autonomous Region. Vertebrata PalAsiatica, v. 13(1), January, p. 24-33, illus., 15 refs., (Chinese with English summary).

The following Lower Cretaceous reptiles are described:
Sinopliosaurus fusuiensis, sp. nov. (Pliosauridae)
Asiataosaurus kwangshiensis, sp. nov. (?Brachiosauridae[Sauropoda incertae sedis])
Prodeinodon kwangshiensis, sp. nov. (Megalosauridae)

192 HU CHENGZHI, 1973. A giant hadrosaur fossil from Zhucheng County, Shandong Province. Acta Geologica Sinica, no. 2, p. 179-206, illus., 13 refs., (Chinese with English summary).

Shandongosaurus giganteus gen. et sp. nov. (Hadrosauridae) is described from numerous bones collected from the Upper Cretaceous (Middle part of the Wangshih Series) beds in Zhucheng County of Shandong Province. The site lies at the end of a gully (Lungkuchian) near Lupiao. These beds are equivalent to the horizon which contains *Tanius sinensis* (Hadrosauridae) at Chianghunting of Laiyang.

193 HU SHOWYUNG, 1964. Carnosaurian remains from Alashan, Inner Mongolia. Vertebrata PalAsiatica, v. 8, p. 36-55, illus., 13 refs.

In 1960 carnosaur material was collected by a group of Soviet and Chinese palaeontologists at Maortu and Tashuikou, Alashan Inner Mongolia Autonomous Region. Two new carnosaurs are described: *Chilantaisaurus tashuikouensis* gen. et sp. nov. (Megalosauridae, now Theropoda incertae sedis) from the Upper Cretaceous, Tashuikou, and *C. maortuensis* sp. nov. (Theropoda incertae sedis) from the Lower Cretaceous, Maortu.

194 HUANG XUESHI, 1979. New progress in the research on the South China Meso-Cenozoic red beds: Recommendations from the "Selected works of the South China Cretaceous-Paleogene red beds on-the-spot conference at Nanxiong, Guangdong." Vertebrata PalAsiatica , v. 17(4), p. 344, no refs., (Chinese).

This article is a short discussion of the various papers which were presented as part of the conference. Significant papers presented included one on the fauna and another on the strata of the Upper

Cretaceous - early Tertiary of South China.

195 HUENE, F. VON, 1958. Pre-Tertiary saurians of Asia. Vertebrata PalAsiatica, v. 2(4), p. 201-207, no refs., (Chinese with English summary).

This article lists Mesozoic reptiles known from Asia along with their general distribution. A large number of Upper Cretaceous reptiles from Mongolia and China are noted in this manner, but no further information is included.

196 HUENE, F. VON, 1959. Saurians in China and their relations. Vertebrata PalAsiatica, v. 3(3), p. 119-123, illus., no refs.

A list of fossil reptile genera known from the Upper Cretaceous of China by 1959 is given.

197 HUSSAKOF, LOUIS, 1932. The fossil fishes collected by the Central Asiatic Expedition. American Museum Novitates, no. 553, p. 1-19, illus.

Lower Cretaceous

198 IZMAILOFF, F.F., and DOMENIK, P.N., 1938. Locality of dinosaurs in the Kara-Kalpak Kzyl-Kum [mountains]. Sotsial Nauka Tekhinika, no. 5, p. 87-91.

USSR

199 JAWOROWSKI, ZBIGNIEW and PENSKO, JERZY, 1967. Unusually radioactive fossil bones from Mongolia. Nature, v. 214, p. 161-163, 5 refs.

The gamma radioactivity levels of unidentified fossil bones of turtles and dinosaurs from the Gobi Desert are reported. Regions of Upper Cretaceous age sampled include the Nemegt Basin, Altan Ula, Tsagan Khushu and Bayn Dzak.

200 JENKINS, JR., F.A. and CROMPTON, A.W., 1979. Triconodonta. *In* Mesozoic Mammals: The First Two-thirds of Mammalian History (Lillegraven, J.A., Kielan-Jaworowska, Z. and Clemens, W.A., editors). Berkeley: University of California Press, p. 74-90, 47 refs.

A review of the Triconodonta is presented. At the time of publication of this article the first triconodonts from Asia, *Guchinodon hoburensis* and *Gobiconodon borissiaki* (Amphilestidae), had been described by

Trofimov, 1978.

201 KALANDADZE, N.N. and KURZANOV, S.M., 1974. Lower Cretaceous localities of terrestrial vertebrates in Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 1, p. 288-295, (Russian with English summary).

Lower Cretaceous

202 KALANDADZE, N.N. and RAUTIAN, A.S., 1983. Position of Central Asia in zoogeography of the Mesozoic era. *In* Fossil Reptiles of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 24, p. 6-44, 108 refs.

203 KALANDADZE, N.N. and RESHETOV, U.YU., 1971. Finds of the oldest mammals in Gobi. Priroda, no. 4, p. 106-107, no refs., (Russian).

204 KALANDADZE, N.N. and RESHETOV, U.YU., 1971. Interesting paleontological finds in Mongolia. Priroda, no. 5, p. 83-84, illus., no refs., (Russian).

This short article summarizes the results of an excavation of Lower Cretaceous deposits at Khoboor, Mongolia. Besides abundant psittacosaur and lizard finds, the remains of mammals representing five orders, including Trituberculata, Insectivora, Symmetrodonta and Triconodonta were found.

205 KERMACK, KENNETH A. and KIELAN-JAWOROWSKI, Z., 1971. Therian and non-therian mammals. *In* Early Mammals (Kermack, D.M. and Kermack, K.A., editors). Zoological Journal of the Linnean Society, v. 50, suppl. 1, p. 103-115.

The Asian multituberculates ***Kamptobaatar*** (Taeniolabididae) and ***Sloanbaatar*** (Sloanbaataridae) are described in this article.

206 KHOSATZKY, L.I., and MLYNARSKI, M., 1971. Chelonians from the Upper Cretaceous of the Gobi Desert, Mongolia. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part III. Palaeontologia Polonica, no. 25, p. 131-144, illus., 22 refs.

This article describes the following species from the Gobi Desert of Mongolia:

Mongolemys elegans gen. et sp. nov. (Dermatemydidae), *Trionyx* sp. (Trionychidae) and Amphichelydia gen. et sp.

indet. from Tsagan Khushu, *Tsaotanemys rugosa* (Dermatemydidae) and *Trionyx* sp. from Ulan Bulak and *Trionyx* sp. from Khar Teg.

207 KHOSBAYAR, P., 1979. The Lower Cretaceous coal-bearing deposits of the Choyren Depression and their paleontological characteristics. *In* Mesozoic and Cenozoic Fauna of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 8, p. 100-107, 124, 150, illus., 5 refs., (Russia with English summary).

Lower Cretaceous

208 KIELAN-JAWOROWSKA, ZOFIA, 1965. Expeditions of the Palaeozoology Department of the Academy of Sciences to the Gobi Desert. Przeglad Geologiczny, (1965), p. 30-32, no refs., (Polish).

209 KIELAN-JAWOROWSKA, Z., 1965. Third (1965) Polish-Mongolian Paleontological Expedition to Mongolia. Society of Vertebrate Paleontology News Bulletin, no. 76, p. 47-48, no refs.

210 KIELAN-JAWOROWSKA, Z., 1966. Third (1965) Polish-Mongolian Palaeontological Expedition to the Gobi Desert and western Mongolia. Polska Akademiia Nauk, Bulletin de l'Academie Polonaise des Sciences, Series des Sciences Biologiques, v. 14(4), p. 249-252, 10 refs.

See Keilan-Jaworowska and Dovchin, 1968.

211 KIELAN-JAWOROWSKA, Z., 1966. Third expedition of the Palaeozoology Department of the Polish Academy of Sciences to the Gobi Desert. Przrglad Geologiczny, (1966), p. 108-110, no refs., (Polish with Russian and English summaries).

See Kielan-Jaworowska and Dovchin, 1968.

212 KIELAN-JAWOROWSKA, Z., 1967. Les resultats des expeditions paleontologiques Polono-Mongoles (1963 - 1965) dans le desert de Gobi et en Mongolie occidentale. Problemes Actuels de Paleontologie, Colloques Internationaux du Centre National de la Recherche Scientifique, no. 163, p. 419-426, 33 refs.

See Kielan-Jaworowska and Dovchin, 1968.

213 KIELAN-JAWOROWSKA, Z., 1968. Urwelttiere in der Wuste Gobi. Bil der

Wissenschaft, (1968), p. 582-591, no refs.

214 KIELAN-JAWOROWSKA, Z., 1969. Discovery of a multituberculate marsupial bone. Nature, v. 222, p. 1091-1092, 17 refs.

The first report of "marsupial bones" (prepubis or epipubis) in multituberculate material is made in this article. The skull and pubis of *Kryptobaatar dashzevegi* (Eucosmodontidae) were found in the Djadokhta Formation (?Coniacian-Santonian) at Bayn Dzak (Shabarakh Usu). In the opinion of the author the presence of the marsupial bone does not imply close relationship of the multituberculates with monotremes or the marsupials.

215 KIELAN-JAWOROWSKA, Z., 1969. Fossils from the Gobi Desert. Science Journal, v. 5A(1), p. 32-38, illus., 4 refs.

Popular account of the Polish-Mongolian Paleontological Expeditions to Mongolia between 1963-1965. General descriptions are given of collection sites and specimens including: *Tarbosaurus baatar* (Tyrannosauridae) from Tsagan Khushu in the Nemegt Basin; *Deinocheirus mirificus* (Deinocheridae) and *Saurolophus angustirostus (Hadrosauridae) from the Nemegt Basin (Nemegt Formation); Pinacosaurus* (Ankylosauridae), *Protoceratops andrewsi* (Protoceratopsidae) and the mammals *Kennalestes gobiensis* (Kennalestidae) and *Zalambdalestes* (Zalambdalestidae) from Bayn Dzak (Djadokhta Formation).

216 KIELAN-JAWOROWSKA, Z., 1969. *Hunting for dinosaurs*. Cambridge, Massachusetts: MIT Press, 177 pp, illus.

This is a translation of the Polish book "Polowanie na Dinozaury". It is a popular account of the Polish-Mongolian Palaeontological Expeditions to Mongolia up to 1965. Most localities worked and specimens collected are named and discussed.

217 KIELAN-JAWOROWSKA, Z., 1969. Preliminary data on the Upper Cretaceous Eutherian mammals from Bayn Dzak, Gobi Desert. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part I. Palaeontologia Polonica, no. 19, p. 171-191, illus., 36 refs.

A preliminary record of the Upper Cretaceous Eutherian mammals from Bayn Dzak (Djadokhta Formation) in the Gobi Desert is given. All mammals (except one skull) collected at Bayn Dzak came from stratigraphical horizon II. One multituberculate skull was collected 13m higher in horizon IV, near the top of Flaming Cliffs. Horizon II crops out in Bayn Dzak in three fields. These are:

1) "The Main Mammal Field" at the base of the Flaming Cliffs. All mammal specimens collected by the American Expeditions and by the 1964 Polish-Mongolian Palaeontological Expedition came from here.
2) "The Ruins" 2500m NW of the Flaming Cliffs. The 1965 and 1967 Polish-Mongolian Palaeontological Expeditions collected here in addition to The Main Mammal Field.
3) "The Volcano" , at the foot of a hill 2000m NW of The Ruins was also worked.
Most specimens from this horizon came from sandstone nodules, the only exception being a partial multituberculate skull found in sandstone containing *Protoceratops andrewsi* (Protoceratopsidae).

Kennalestes gobiensis sp. nov. (Kennalestidae) is described and illustrated. *Zalambdalestes* (Zalambdalestidae) is re-diagnosed on the basis of new *Z. grangeri* material.

218 KIELAN-JAWOROWSKA, Z., 1970. New Upper Cretaceous multituberculate genera from Bayn Dzak, Gobi Desert. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part II. Palaeontologia Polonica, no. 21, p. 35-49, illus., 34 refs.

Description and figures of *Gobibaatar parvus(=Kryptobaatar dashzevegi)* gen. et sp. nov. (?Neoplagiaulacidae, Ptilodontoidea), *Sloanbaatar mirabilis* gen. et sp. nov. (Sloanbaataridae) and *Kryptobaatar dashzevegi* gen. et sp. nov. (Eucosmodontidae, Taeniolabidoidea) and *Kamptobaatar kuczynskii* gen. et sp. nov. (Taeniolabididae, Taeniolabidoidea) are given. These four new Djadokhta Formation (?Coniacian and/or ?Santonian) multituberculates from Bayn Dzak, Mongolia are used to place the Formation in the lower part of the Upper Cretaceous.

219 KIELAN-JAWOROWSKA, Z., 1970. Unknown structures in multituberculate skull. Nature, v. 226(5249), p. 974-976, illus., 13 refs.

Features previously unknown in multituberculates are described from a specimen of *Kamptobaatar kuczynskii* (Taeniolabididae), a new multituberculate from the Upper Cretaceous (?Coniacian and/or ?Santonian) deposits at Bayn Dzak, Mongolia. Evidence from this fossil does not support a polyphyletic origin for mammals.

220 KIELAN-JAWOROWSKA, Z., 1971. Skull structure and the affinities of the Multituberculata. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part III. Palaeontologia Polonica, no. 25, p. 5-41, 78 refs.

The skull structures of the Upper Cretaceous multituberculates *Kryptobaatar* (Eucosmodontidae) and *Sloanbaatar* (Sloanbaataridae) are described in detail. On comparison, the braincase of the Multituberculata is shown to be more allied to the Monotremata than to the Docodonta or the Triconodonta. These four groups form the subclass Prototheria, equivalent to the subclass Theria.

221 KIELAN-JAWOROWSKA, Z., 1974. Migrations of the Multituberculata and the Late Cretaceous connections between Asia and North America. *In* Studies on Vertebrate Paleontology. South African Museum, Annals, v. 64, September, p. 231-243, illus., 41 refs.

The stratigraphical and geological distribution of all described genera of multituberculates is reviewed by the author. The Multituberculata originated in the early Mesozoic of Europe and then migrated to North America and Asia. In the Cretaceous of Asia the Taeniolabidoidea predominate. From this group, two Taeniolabidoid families, the Eucosmodontidae and Taeniolabididae originated in Asia and reached North America in the Late Cretaceous. No North American multituberculates reached Asia in the Late Cretaceous. It is suggested that the faunal interchange between the two continents occurred in one direction only. Marine currents in the sea barrier allowed only occasional drifts of mammals from Asia to North America, but not vice versa.

222 KIELAN-JAWOROWSKA, Z., 1974. Multituberculate succession in the Late Cretaceous of the Gobi Desert (Mongolia). *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part V. Palaeontologia Polonica, no. 30, p. 23-44, illus., 43 refs.

The Upper Cretaceous Gobi Desert mammal localities are discussed. The fauna from four localites (Nemegt, Khulsan, Khermeen Tsav I and II) in the Barun Goyot Formation (Lower Nemegt Beds) is compared with that from the Djadokhta Formation of Bayn Dzak. The formations do not contain any multituberculate species in common.

The multituberculate assemblage from the Djadokhta Formation consists of 6 genera and species: *Djadochtatherium(=Catopsalis) matthewi* (Taeniolabididae), *Gobibaatar parvus(=Kryptobaatar dashzevegi)* (?Taeniolabididae), *Kryptobaatar dashzevegi* (Eucosmodontidae), *Sloanbaatar mirabilis* (Sloanbaataridae n. fam.), *Kamptobaatar kuczynskii* (Taeniolabididae), and *Bulganbaatar nemegtbaataroides* gen. et sp. nov. (Eucosmodontidae).

The Barun Goyot multituberculate assemblage consists of *Chulsanbaatar vulgaris* gen. et sp. nov. (Chulsanbaataridae n. fam.), *Nemegtbaatar gobiensis* gen. et sp. nov. (Eucosmodontidae), and *Djadochtatherium(=Catopsalis) catopsaloides* sp. nov. (Taeniolabididae) and 3 more undescribed genera.

Two new multituberculate families, Sloanbaataridae and Chulsanbaataridae, are also established. Anatomical differentiation of multituberculates suggests that the Barun Goyot Formation is of

Campanian age. A map of Upper Cretaceous mammal localities is included.

223 KIELAN-JAWOROWSKA, Z., 1975. Late Cretaceous mammals and dinosaurs from the Gobi Desert. American Scientist, v. 63(2), p. 150-159, illus., 35 refs.

This paper is a non-technical review of the Polish-Mongolian Paleontological Expeditions to Mongolia from 1963 to 1971. An account is given of the Mesozoic mammals and Upper Cretaceous dinosaurs collected during the expeditions. Of the approximately seventy dinosaur genera known from the Upper Cretaceous of Asia and North America only the following three genera are common to both continents: *Saurolophus* (Hadrosauridae), *Procheneosaurus(=Corythosaurus,* Hadrosauridae), and *Archaeornithomimus(=Ornithomimus)* (Ornithomimidae), the latter of which may be congeneric with the American species. A list is included of the Upper Cretaceous Mongolian dinosaurs and the formations they are found in.

224 KIELAN-JAWOROWSKA, Z., 1975. Possible occurrence of marsupial bones in Cretaceous Eutherian mammals. Nature, v. 255(5511), p. 698-699, illus., 11 refs.

The partial skeleton of *Barunlestes bulteri* (Zalambdalestidae) from the Barun Goyot Formation in the Khulsan locality of the Gobi Desert has a triangular fossa on the pubic bone. The author interprets this to be an articular surface for a "marsupial bone" (prepubis or epipubis).

225 KIELAN-JAWOROWSKA, Z., 1975. Evolution and migrations of the Late Cretaceous Asian mammals. *In* Problemes Actuels de Paleontologie: Evolution des Vertebres. France: Colloques Internationaux du Centre National de la Recherche Scientifique, no. 218, p. 573-584, 48 refs., (English with French summary).

226 KIELAN-JAWOROWSKA, Z., 1975. Evolution of the therian mammals in the Late Cretaceous of Asia: part I. Deltatheridiidae. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part VI. Palaeontologia Polonica, no. 33, p. 103-131, illus., 40 refs.

A Late Cretaceous mammalian family from Mongolia, the Deltatheridiidae, is described, including *Deltatheroides cretacicus* (Djadokhta Formation) and two subspecies of *Deltatheridium pretrituberculare* (Barun Goyot Formation and Khermeen Tsav "Formation"). It is concluded that this family cannot be placed with confidence in either the Eutheria or Metatheria.

227 KIELAN-JAWOROWSKA, Z., 1975. Preliminary description of two new eutherian genera from the Late Cretaceous of Mongolia. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part VI. Palaeontologia Polonica, no. 33, p. 5-15, illus., 22 refs.

A preliminary description of two new monotypic eutherian genera, *Asioryctes nemegetensis* (Palaeoryctidae[=Kennalestidae]) and *Barunlestes butleri*, (Zalambdalestidae), is given. These are from the (?)Middle Campanian Barun Goyot Formation and the equivalent Khermeen Tsav "Formation", both located in the Gobi Desert (Mongolia). Their morphological and phylogenetic relationships are discussed.

228 KIELAN-JAWOROWSKA, Z., 1977. Evolution of the therian mammals of the Late Cretaceous of Asia: part II. Postcranial skeleton in *Kennalestes* and *Asioryctes*. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part VII. Palaeontologia Polonica, no. 37, p. 65-83, illus., 52 refs.

The postcranial skeleton of *Asioryctes nemegetensis* (Palaeoryctidae[=Kennalestidae]) is described from two specimens known from the Upper Cretaceous of Mongolia. The first specimen was recovered from the Barun Goyot Formation (middle Campanian) at Nemegt, and the second from the Khermeen Tsav "Formation" at Khermeen Tsav.

The atlas of *Kennalestes gobiensis* (Kennalestidae) from the Upper Cretaceous Djadokhta Formation at Bayn Dzak is also described.

The non-opposable pollex and hallux of the manus and pes of *Asioryctes*, together with the sedimentological data, suggests that the Cretaceous Eutherian mammals were terrestrial. The theory of an arboreal origin for the therian mammals is rejected.

229 KIELAN-JAWOROWSKA, Z., 1978. Evolution of the therian mammals in the Late Cretaceous of Asia: part III. Post-cranial skeleton in Zalambdalestidae. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part VIII. Palaeontologia Polonica, no. 38, p. 5-41, illus., 59 refs.

The postcranial skeletons of the Late Cretaceous Eutherian mammals *Zalambdalestes lechei* and *Barunlestes butleri* (Zalambdalestidae) are described and illustrated. The zalambdalestids are shown to possess a mosaic of primitive and advanced characteristics. *Zalambdalestes* is found in the Late Santonian and/or Early Campanian Djadokhta Formation at Bayn Dzak in the Mongolian People's Republic. *Barunlestes* is found in the ?Middle Campanian Barun Goyot Formation at several sites in the Nemegt Basin and in the Red Beds of Khermeen Tsav, Mongolia.

230 KIELAN-JAWOROWSKA, Z., 1979. Pelvic structure and nature of reproduction in Multituberculata. Nature, v. 277, p. 402-403, illus., 8 refs.

The pelvic girdles of multituberculates from the Late Cretaceous of Mongolia, especially that of *Kryptobaatar dashzevegi* (Eucosmodontidae) from the Djadokhta Formation, were recently reconstructed. Their structure suggests that multituberculates were viviparous.

231 KIELAN-JAWOROWSKA, Z., 1980. Absence of ptilodontoidean multituberculates from Asia and its palaeogeographic implications. Lethaia, v. 13(2), p. 169-173, illus., 27 refs.

Gobibaatar parvus is recognized to be a junior synonym of *Kryptobaatar dashzevegi* and assigned to the Taeniolabidoidea, Eucosmodontidae, thus making Ptilodontoidea unknown in Asia. This gives further support to the theory that the Marsupialia and Ptilodontoidea originated in the New World and never reached Asia, whereas the Taeniolabidoidea and Eutheria originated in Asia and dispersed to North America in the Late Cretaceous.

232 KIELAN-JAWOROWSKA, Z., 1981. Evolution of the therian mammals in the Late Cretaceous of Asia: part IV. Skull structure in *Kennalestes* and *Asioryctes*. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part IX. Palaeontologia Polonica, no. 42, p. 25-78, illus., (English with Polish summary).

Skulls of the Eutherian genera *Asioryctes* and *Kennalestes* (Kennalestidae, nov. fam.) from Mongolia are described. The family Kennalestidae nov. and subfamily Asioryctinae nov. within the Palaeoryctidae(=Kennalestidae) are erected. Lack of evidence for the presence of a promontory artery supports the idea that the primitive mammalian morphotype with two vessels should be revised.

233 KIELAN-JAWOROWSKA, Z., 1982. Marsupial-placental dichotomy and paleogeography of Cretaceous Theria. *In* Palaeontology, Essential of Historical Geology - Proceedings of an International Meeting in Venice (Gallitelli, E.M., editor). Italy: STEM Mucci Modena Press, p. 367-383.

This paper is a discussion of recent evidence clarifying the development of the marsupial and placental mammals during the Cretaceous. New data on the age of mammal-bearing Upper Cretaceous formations in Mongolia suggests they are older than previously suspected, with the Djadokhta Formation as ?Upper Coniacian or ?Lower Santonian in age and the Barun Goyot Formation likely ?Upper Santonian. On this basis, the author hypothesizes that eutherian mammals, taeniolabidoid multituberculates and possibly the Deltatheroidea originated in Asia.

After the main continents were isolated during the Lower Cretaceous, Asia became one of several separate areas of mammalian evolution. From a common *Aegialodon*-like ancestor, the Marsupialia developed in western North America, the Pappotherida in eastern North America and the Eutheria in Asia.

234 KIELAN-JAWOROWSKA, Z., 1984. Collecting Cretaceous dinosaurs and mammals in the Gobi Desert. Fossils Quarterly, v. 2(4), p. 5-17, illus., 3 refs.

This article is a popular account of the Polish-Mongolian Paleontological Expeditions to Mongolia between 1963 and 1971. A brief history of the work leading up to the expedition is included. Named specimens in the article include: *Tarbosaurus baatar* (Tyrannosauridae), *Gallimimus bullatus* (Ornithomimidae), *Protoceratops andrewsi* (Protoceratopsidae), *Velociraptor mongoliensis* (Dromaeosauridae), *Deinocheirus mirificus* (Deinocheridae), *Opisthocoelicaudia skarzynskii* (?Euhelopodidae[=Camarasauridae]), *Saurolophus angustirostris* (Hadrosauridae), *Tylocephale*, *Prenocephale*, *Homalocephale*, (Pachycephalosauridae) *Saichania* (Ankylosauridae), *Tarchia* (Ankylosauridae) and *Oviraptor* (Oviraptoridae).

235 KIELAN-JAWOROWSKA, Z. and BARSBOLD, R., 1970. Mongolian paleontological research in the Gobi Desert (MPR). *In* The Materials of the Scientific Conference Devoted to the Tercentenary of the Geological Service of the MPR, Ulan Baatar, p. 56-61, (Russian).

Not seen

236 KIELAN-JAWOROWSKA, Z. and R. BARSBOLD, 1972. Narrative of the Polish-Mongolian Palaeontological Expeditions 1967 - 1971. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part IV. Palaeontologia Polonica, no. 27, p. 5-13, illus., 30 refs.

The results of the field work in Bayn Dzak from 1967 to 1969 and at various other localities in the Gobi desert in 1970 and 1971 are described. The Lower Nemegt Beds (Barun Goyot Formation)at Nemegt, Khulsan and Khermeen Tsav I and II yielded numerous specimens including *Protoceratops* sp. (Protoceratopsidae) material. The Upper Nemegt Beds (Nemegt Formation) at Nemegt and Altan Ula produced numerous dinosaur specimens including 25 skeletons of *Saurolophus angustirostris* (Hadrosauridae). Excavations were also carried out at Bayn Dzak, Toogreegeen and Sheeregeen.

237 KIELAN-JAWOROWSKA, Z., BOWN, T.H. and LILLEGRAVEN, J.A., 1979. Eutheria. *In* Mesozoic Mammals: The First Two-thirds of Mammalian

History (Lillegraven, J.A., Kielan-Jaworowska, Z. and Clemens, W.A., editors). Berkeley: University of California Press, p. 221-258, 110 refs.

The Mesozoic Eutheria are reviewed. The fossil Asian eutherians are: *Kennalestes gobiensis* (Kennalestidae), *Asioryctes nemegtensis* (Palaeoryctidae[=Kennalestidae]), *Zalambdalestes lechi*, *Barunlestes bulteri*, (Zalambdalestidae), *Endotherium niinomii* (?Eutheria incertae sedis), *Prozalambdalestes simpsoni*, *Prokennalestes kozlovi* nomina nuda.

238 KIELAN-JAWOROWSKA, Z. and DASHZEVEG, D., 1978. New Late Cretaceous mammal locality in Mongolia and a description of a new multituberculate. Acta Palaeontologica Polonica, v. 23(2), p. 115-130, illus., 21 refs., (English with Polish and Russian summaries).

The skull and post-cranial elements of the new multituberculate *Tugrigbaatar saichanensis* gen. et sp. nov., are described and the animal assigned to the Eucosmodontidae. This specimen was collected from the outcrops at Toogreegeen , near Bayn Dzak, Mongolia.

239 KIELAN-JAWOROWSKA, Z. and DOVCHIN, N., 1968. Narrative of the Polish-Mongolian Palaeontological Expeditions 1963 - 1965. Palaeontologia Polonica, no. 19, p. 7-30, illus., 39 refs.

Preliminary and follow up work from the Polish-Mongolian Palaeontological Expeditions from 1963 to 1965 is reviewed. Fossils from the Upper Cretaceous included the following material.

1. Insectivores and multituberculates from the Djadokhta Formation at Bayn Dzak .
2. A nearly complete sauropod from Altan Ula IV, and a sauropod skull Nemegt, both in the Nemegt Basin.
3. Two complete ornithomimids from Tsagan Khushu, Nemegt Basin, as well as fragmentary ornithomimid remains from Altan Ula IV and Nemegt.
4. A *Pinacosaurus* sp. (Ankylosauridae) from Bayn Dzak, and other fragmentary armoured dinosaur remains from Bayn Dzak and the Nemegt Basin.
5. The partial skeleton of a small dinosaur from a new ornithischian family.
6. The fore-limbs and pelvic girdle of a new theropod, *Deinocheirus* (Deinocheiridae) from Altan Ula IV, Nemegt Basin.
7. Six partial carnosaur skeletons probably belonging to *Tarbosaurus bataar* (Tyrannosauridae) from the Nemegt Basin.
8. Skulls of 30 lizards and 2 crocodiles from the Djadokhta Formation at Bayn Dzak.

240 KIELAN-JAWOROWSKA, Z., EATON, J.G. and BOWN, T.M., 1979. Theria

of metatherian-eutherian grade. *In* Mesozoic Mammals: The First Two-thirds of Mammalian History (Lillegraven, J.A., Kielan-Jaworowska, Z. and Clemens, W.A., editors). Berkeley: University of California Press, p. 182-191, 32 refs.

This article reviews the Theria of metatherian-eutherian grade. Asian members of this group come from the Mongolian People's Republic. They are: ***Kielantherium gobiensis*** (Aegialodontidae), ***Deltatheridium pretrituberculare***, ***Deltatheroides cretacicus*** (Deltatheridiidae), ***Hyotheridium dobsoni*** (?Deltatheridiidae).

241 KIELAN-JAWOROWSKA, Z. and KOWALSKI, K., 1965. Polish-Mongolian Palaeontological Expeditions to the Gobi Desert in 1963 and 1964. Polska Akademia Nauk, Bulletin de l'Academie Polonoise des Sciences Serie des Sciences Biologique, v. 13(3), p. 175-179, illus., 10 refs.

A report is given of the Joint Polish-Mongolian Palaeontological Expeditions in 1963 and 1964. The 1963 expedition was a reconnaisance trip. In 1964 four months were spent in the Nemegt Basin and at Bayn Dzak.

In the Nemegt Basin three Upper Cretaceous localites were worked: Nemegt, Altan Ula, and Tsagan Ula. These sites produced many specimens including *Saurolophus angustirostris* (Hadrosauridae), *Tarbosaurus efremov* (Tyrannosauridae), and *Dyoplosaurus* (*=Euoplocephalus*) *giganteus* (Ankylosauridae).

Bayn Dzak produced specimens of *Protoceratops andrewsi* (Protoceratopsidae), *Pinacosaurus* (Ankylosauridae), and the mammals *Djadochtatherium* (*=Catopsalis*, Taeniolabididae) and *Zalambdelestes* (Zalambdalestidae).

242 KIELAN-JAWOROWSKA, Z., POPLIN, C., PRESLEY, R. and DE RICQLES, A., 1984. Preliminary note on multituberculate cranial anatomy studied by serial sections. *In* Third Symposium on Mesozoic Terrestrial Ecosystems: Short Papers. (Reif, W-E. and Westphal, F., editors), Tubingen, p. 123-128, 15 refs.

The skulls of *Nemegtbaatar gobiensis* (Eucosmodontidae) and *Chulsanbaatar vulgaris* (Chulsanbaataridae), two Late Cretaceous (?Middle Campanian) multituberculates from Mongolia were serially-sectioned. From these, enlarged models of the endocranial cavity of *Nemegtbaatar* were reconstructed. These models included certain nerves and vessels as well as the bony labyrinth. *Chulsanbaatar* was not modelled.

243 KIELAN-JAWOROWSKA, Z. and SLOAN, R. E., 1979. *Catopsalis* (Multituberculata) from Asia and North America and the problem of Taeniolabidid dispersal in the Late Cretaceous. Acta Palaeontologica

Polonica, v. 24(2), p. 187-197, illus., 23 refs., (English with Polish summary).

A morphological sequence was reconstructed from known species of *Catopsalis* (Taeniolabididae) beginning in Asia from the (?)Late Santonian to the Middle Campanian and then in North America from the Late Maastrichtian to the Palaeocene. On this basis it is believed *Catopsalis* and possibly the family Taeniolabididae developed in Asia, and spread to North America.

244 KIELAN-JAWOROWSKA, Z. and SOCHAVA, A.V., 1969. The first multituberculate from the uppermost Cretaceous of the Gobi Desert, Mongolia. Acta Palaeontologica Polonia, v. 14(3), p. 355-371, illus., 15 refs., (English with Polish and Russia summaries).

Buginbaatar transaltaiensis gen. et sp. nov. (now in Eucosmodontidae), from the Upper Cretaceous of Khaichin Ula in the Bugeen Tsav (Bugin Tsav) Region of the Mongolian People's Republic is described from an incomplete skull.

245 KIELAN-JAWOROWSKA, Z. and TROFIMOV, B.A., 1980. Cranial morphology of the Cretaceous Eutherian mammal *Barunlestes*. Acta Palaeontologica Polonica, v. 25(2), p. 167-186, illus., 17 refs.

The skull and mandible of the Late Cretaceous (?Middle Campanian) Eutherian *Barunlestes* (Zalambdalestidae) from the Gobi Desert (Barun Goyot Formation and Khermeen Tsav "Formation") of Mongolia is described. The basicranial structure supports the idea that the primitive mammalian morphotype with two vessels should be revised.

246 KIELAN-JAWOROWSKA, Z. and TROFIMOV, B.A., 1981. A new occurrence of Late Cretaceous Eutherian mammal *Zalambdalestes*. Acta Palaeontologica Polonica, v. 26(1), p. 3-7, illus., 9 refs., (English with Polish summary).

The nearly complete jaw of *Zalambdalestes lechei* (Zalambdalestidae), of the Toogreeg Beds, Gobi Desert is described, and supports the opinion that the Toogreeg Beds are the stratigraphic equivalent to the Djadokhta Formation (?Late Santonian and/or ?Early Campanian), where the only other known *Z. lechei* has been found.

247 KIRPICHNIKOV, A.A., 1956. The successes of paleontology in the Chinese People's Republic. II. The paleontological institutions of China. Akademia Nauk SSSR, Vestnik, v. 9, p. 59-62, no refs., (Russian).

A discussion of Chinese palaeontological institutions and laboratories.

248 KLEBANOVA, I.M., 1963. The cemetery of Cretaceous dinosaurs in Alashan (Maortu). Vertebrata PalAsiatica, v. 7(1), p. 52-58, no refs., (Chinese).

Geological profiles of three important dinosaur producing areas of Alashan, Inner Mongolia are described. These sites were discovered and excavated by Chinese and Soviet palaeontologists in 1959 and 1960. In the southwest area of Maortu, beds were found to contain large dinosaur fossils. In the northwest area, the beds contained "bird-foot" dinosaur fossils, and the strata are interpreted to be from the end of the Lower Cretaceous or beginning of the Upper Cretaceous. The third area, 15 km northeast of Maortu, was indentified as Upper Cretaceous in age, and fossil hadrosaurs, carnivorous dinosaurs and turtles were found.

249 KOBAYASHI, TEIICHI, 1960. Recent palaeontological studies in China. Journal of the Geological Society of Japan, v. 66, p. 675-680, no refs., (Japanese).

250 KOBAYASHI, T. and SUZUKI, K., 1942. On fossil beds in the Cretaceous Sungari Series in Heilongjiang. Journal of the Faculty of Science, Imperial University of Tokyo, Section II, v. 6(part 5), p. 75-90, 12 refs.

The geological age of the Chantou and Sungari Series is discussed. Geological observations are made on eight fossil localities distributed from Nungan in central Manchuria to Toulimu in north Manchuria. The fossils discussed are principally invertebrates and some fish. Higher vertebrates are mentioned but not identified. The Fulung Formation of the Sungari Series is suggested to be Upper Cretaceous.

251 KOBAYASHI, T., SUZUKI, K. and TAKAI, F., 1942. A preliminary report on the four distinct suites of Mesozoic faunas in the Koreo-Manchurian Land. Journal of the Faculty of Science, Imperial University of Tokyo, Section II, v. 6(parts 4-10), p. 63-74, 20 refs.

Based on changes in fossil fishes and invertebrates, four distinct series of Mesozoic faunas from Manchuria are described. The Sungari Series, containing *Leptolepis longicephalus* (Leptolepidae) is interpreted to be Upper Cretaceous in age.

252 KOLESNIKOV, CH.M. and SOCHAVA, A.V., 1972. Paleobiochemical study of egg shells of the Cretaceous dinosaurs from Gobi. Palaeontological Journal, v. 2, p. 235-245, illus., 21 refs.

Studies were made on multicanalicular eggshells from Albian-Cenomanian deposits of the Algoy Ulan Tsav escarpments in the northern Gobi, collected by the Soviet-Mongolian Geological Expedition in 1968. This shell type is biochemically closer to the eggshell of modern birds than it is to turtle eggshell. It could be an evolutioary intermediate between a soft coriaceous membrane and a calcareous bird shell.

253 KONJUKOVA, E.D., 1954. New fossil crocodiles from Mongolia. *In* Crustacean and Lower Vertebrates of Mesozoic Continental Deposits. Travaux de l'Institute Paleozoologique de l'Academie des Sciences de l'URSS, v. 48, p. 171-194, illus., (Russian).

Based on new fossil crocodiles collected in Mongolia in 1949, the author establishes the new family Paralligatoridae. This new material from Upper Cretaceous deposits can be included in two new species: *Paralligator gradilifrons* sp. nov. from Sheeregeen Gashoon, and *Paralligator ancestralis* sp. nov. from Nemegt. In addition, a specimen of *Alligator* sp. (Crocodylidae) was collected.

These forms of crocodiles are compared to each other, as well as to *Boltosaurus*(?) from the Upper Cretaceous of Colorado and Montana and *Brachychampsa* (Crocodylidae) from the Upper Cretaceous of Montana. Based on these comparisons, and after considering the relationships of the new family to other families of crocodiles, the author concludes that extant alligators from North America and China are all descendents of the Cretaceous Paralligatoridae, which originated in Central Asia.

254 KONZHUKOVA, E.D.: see KONJUKOVA, E.D.

255 KRAMARENKO, N.N., 1974. On the work of the Joint Soviet-Mongolian Paleontological Expedition during the years 1969 - 1972. *In* Mesozoic and Cenozoic Faunas and Biostratigraphy of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 1, p. 9-18, (Russian with English summary).

This paper reviews the objectives and results of the excavations carried out by the Joint Soviet-Mongolian Expeditions between 1969 and 1972. (Annotation from English summary by journal)

256 KRAUS, M.J., 1979. Eupantotheria. *In* Mesozoic Mammals: The First Two-thirds of Mammalian History (Lillegraven, J.A., Kielan-Jaworowska, Z. and Clemens, W.A., editors). Berkeley: University of California Press, p. 162-171, 41 refs.

This article reviews the Eupantotheria. One Mongolian member from this group, an undescribed new genus and species from Khoboor, is possibly Aptian or Albian in age.

257 KUROCHKIN, E.N., 1982. A new order of birds from the Lower Cretaceous of Mongolia. Akademia Nauk SSSR, Doklady, v. 262(2), p. 452-455, illus., 12 refs., (Russian).

Lower Cretaceous

258 KURZANOV, S.M., 1972. Sexual dimorphism in protoceratopsians. Paleontological Journal, v. 6(1), p. 91-97, illus., 22 refs.

The skull of protoceratopsian dinosaurs is shown to have secondary sexual characteristics. The nasal horn and the degree of frill broadening are shown to be sexually associated but the frontal-parietal depression and the rudimentary brow horns are not. The highly raised frill and the broadened facial portion of the skull may also be secondary sexual characters of males.

The study was done using skulls of *Protoceratops* (Protoceratopsidae) collected from Bayn Dzak and Toogreegeen Us of Mongolia.

259 KURZANOV, S.M., 1976. A new Late Cretaceous carnosaur from Nogen-Tsav. *In* Paleontology and Biostratigraphy of Mongolia . The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 3, p. 93-104, 360, 380, illus., 14 refs., (Russian with English summary).

Alioramus remotus gen. et sp. nov. (Tyrannosauridae) is described from a skull. It is distinguished from other genera by its elongated skull, relatively large growth of the nasal area and having three extra teeth in the upper and lower jaws. The nervous system and blood vessels are restored as much as possible. A brief description of the postcranial skeleton is included.

(Annotation from English summary by journal)

260 KURZANOV, S.M., 1976. Brain-case structure in the carnosaur *Itemirus nigen* and some aspects of the cranial anatomy of dinosaurs. Paleontological Journal, v. 10(3), p. 381-369.

USSR

261 KURZANOV, S.M., 1981. On the unusual theropods from the Upper Cretaceous of Mongolia. *In* Fossil Vertebrates of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 15, p. 39-50, illus., 6 refs., (Russian with English summary).

Avimimus protentosus gen. et sp. nov. (Avimimidae, n. fam. [Theropoda incertae sedis]) collected from Udan Sayr, Mongolia is described. It is characterized by many avian features not noted in dinosaurs before.

(Annotation from English summary by journal)

262 KURZANOV, S.M., 1982. Structural characteristics of the fore limbs of *Avimimus* (Avimimidae). Paleontological Journal, v. 16(3), p. 108-112, 11 refs.

Analysis of the humerus, ulna and the distinctive structure of the ulnar articulation of *Avimimus portentosus* (Theropoda incertae sedis), from Udan Sayr, Mongolia shows distinctive similarities to features found in birds. This indirect evidence suggests to the author that this theropod dinosaur had feathered limbs.

263 KURZANOV, S.M., 1983. *Avimimus* and the problem of origin of birds. *In* Fossil Reptiles of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 24, p. 104-109, illus., 13 refs., (Russian with English summary).

An analysis is made of some bird-like features in the skeleton of *Avimimus protentosus* (Avimimidae [Theropoda incertae sedis]). It is suggested that birds originated from bipedal cursorial carnosaurs.
(Annotation from English summary by journal)

264 KURZANOV, S.M., 1983. New data on the pelvic structure of *Avimimus*. Paleontological Journal, v. 17(4), p. 110-111, 1 ref.

New data is given on a fragment of the pelvis of *Avimimus portentosus* (Avimimidae [Theropoda incertae sedis]) from the Upper Cretaceous of Udan Sayr, Mongolia, reported in Kurzanov 1981. All previous data in the 1981 diagnosis should be disregarded.

265 KURZANOV, S.M. and A.F. BANNIKOV, 1983. A new sauropod from the Upper Cretaceous of Mongolia. Paleontological Journal, v. 17(2), p. 91-97, 4 refs.

Quaesitosaurus orientalis gen. et sp. nov. (Cetiosauridae[? = Diplodocidae]), from the Upper Cretaceous Barun Goyot Formation is described. This specimen was collected from Shara Tsav in the southestern Gobi desert.

266 KURZANOV, S.M. and T.A. TUMANOVA, 1978. The structure of the endocranium in some Mongolian ankylosaurs. Paleontological Journal, v. 12(3), p. 369-374, illus., 11 refs.

The cranial structures of two Upper Cretaceous ankylosaurs from the Baynshire Formation of Mongolia are described in detail. The specimens of *Talarurus plicatospineus*, from Bayn Shireh, and *Amtosaurus magnus* gen. et sp. nov. (Ankylosauridae), from Amtgay, were collected in 1979. The characteristics of the two genera are compared and some general features of the braincase in ankylosaurs are noted. Some important cranial features distinguishing the ankylosaurs from other groups of dinosaurs are described.

267 LEFELD, JERZY, 1971. Geology of the Djadokhta Formation at Bayn Dzak(Mongolia). *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part III. Palaeontologia Polonica, no. 25, p. 101-127, illus., 46 refs.

Primarily concerned with geology, this paper also discusses some taphonomic problems relating to vertebrate skeletons and dinosaur nests in the Djadokhta Formation. Relatively complete skeletons are common and isolated bones are rare. Teeth of *Protoceratops andrewsi* (Protoceratopsidae), *Pinacosaurus grangeri* (Ankylosauridae) and undetermined small theropods are most frequently found in sandy concretions. Post-mortem transportation does not seem to occur in the Djadokhta Formation.

268 LI GUOQING, 1984. Discovery of *Sinamia* from East Jilin. Vertebrata PalAsiatica, v. 22(2), p. 145-150, illus., 13 refs., (Chinese with English summary).

Lower Cretaceous

269 LI ZHONGJUN, 1974. Records concerning vertebrate fossils in the ancient books of our country. Vertebrata PalAsiatica, v. 12(3), p. 174-180, 18 refs., (Chinese with English summary).

No scientific descriptions are included in this review of ancient records of fossil vertebrates.

270 LILLEGRAVEN, J.A., 1979. Reproduction in Mesozoic mammals. *In* Mesozoic Mammals: The First Two-thirds of Mammalian History (Lillegraven, J.A., Kielan-Jaworowska, Z. and Clemens, W.A., editors). Berkeley: University of California Press, p. 259-276, 4 refs.

The pelvis of *Barunlestes* (Zalambdalestidae) is briefly discussed in this article.

271 LIU DONGSHENG, 1951. On the discovery of the dinosaur and fossil eggs from Laiyang, Shandong. Science Journal, v. 11, p. 1157-1162, illus., (Chinese).

Not seen - unavailable through ILL

272 LIU DONGSHENG, 1957. A new Cretaceous palaeoniscoid fish from Yumen of the Chiuchuan basin, western Gansu. Vertebrata PalAsiatica, v. 1, p. 103-122, illus., 28 refs., (Chinese with English summary).

Lower Cretaceous

273 LIU HSIENTING, 1961. A new amiid from Inner Mongolia, China. Vertebrata PalAsiatica, v. 5, p. 121-129, illus., 9 refs., (Chinese with English summary).

Lower Cretaceous

274 LIU TUNG-SEN: see LIU DONGSHENG

275 LIU XIANTING, SU DEZAO, HUANG WEILONG and ZHANG GUOREI, 1963. The *Lycoptera* fossils of North China. The 1st Special Publication of the Institute of Vertebrate Paleontology and Paleoanthropology. Beijing: Academia Sinica.

Not seen - unavailable through ILL

276 LIU ZHICHENG, 1974. A Cretaceous true bony fish fossil from Chuxiong County, Yunnan Province. Vertebrata PalAsiatica, v. 12(4), p. 249-256, illus., 12 ref., (Chinese with English summary).

Lower Cretaceous

277 LOUDERBACK, GEORGE DAVIS, 1935. Red bed dinosaurs of the Szechuan Basin. Proceedings of the Geological Society of America (1935), p. 333-334, no refs. [Also in: Pan-American Geology, v. 61, p. 376.]

Some bones of a carnivorous dinosaur, possibly related to *Tyrannosaurus rex* (Tyrannosauridae) of the Upper Cretaceous of North America, were found in the Red Beds of the Sichuan basin near Jung Hsien. A brief geological description of the Red Beds is included.

278 LULL, RICHARD SWANN, 1933. A revision of the Ceratopsia or horned dinosaurs. Memoirs of the Peabody Museum, v. 3(part 3), 135 pp., illus., 76 refs.

The original descriptions of several specimens of *Protoceratops andrewsi*

(Protoceratopsidae) from the Upper Cretaceous Djadokhta Formation of Mongolia are included in this overall revision of the ceratopsia.

279 LULL, R.S. and GRAY, S.W., 1959. Growth patterns in the Ceratopsia. American Journal of Science, v. 247, p. 492-503, illus., 10 refs.

The deformed coordinate system of D'Arcy Thompson is applied to both the ontogenetic and phylogenetic series of ceratopsian dinosaurs. The results confirm Lull's phylogeny of 1933. *Protoceratops andrewsi* (Protoceratopsidae) is included in the analysis.

280 LUNGU, A.N., BALAN, T.M. and VOLCHEGURSKIY, L.F. (editors), 1979. Biostratigraphical investigations of the Mesozoic-Cenozoic deposits in the southern peripheral regions of the Russian Platform. (Issued by the T.G. Shevchenko State Pedagolocical Institute at Tiraspol', Moldavian SSR, USSR). Shtiintsa: Kishinev, Moldavian SSR, USSR, 160 pp.

Not seen

281 MA FENGZHEN, 1980. A new genus of Lycopteridae from the Ningxia Huizu Autonomous Region. Vertebrata PalAsiatica, v. 18(4), p. 286-295, illus., 17 refs., (Chinese with English summary).

Lower Cretaceous

282 MA FENGZHEN, 1983. Primitive teleosteans of the Lower Cretaceous of Jiaohe Basin, Jilin, China. Vertebrata PalAsiatica, v. 21(1), p. 17-31, illus., (Chinese with English summary).

Lower Cretaceous

283 MALEEV, EVGENIY ALEKSADROVICH, 1952. Some remarks concerning the geological age and stratigraphic position of the armoured dinosaurs of Mongolia. Comptes Rendus de l'Academie de Sciences de l'URSS, Akademia Nauk SSSR, Doklady, v. 85(4), p. 893-896, illus., (Russian).

This article reviews the occurrence of armoured dinosaurs at four localities in Mongolia excavated in 1946-1949 by the Paleontological Expedition of the Akademiia Nauk SSSR. The following list summarizes the ankylosaurs found at each locality:

Ulan Osh (late Lower Cretaceous): *Syrmosaurus viminocaudus*(= *Pinacosaurus grangeri*, Ankylosauridae) found in association with *Psittacosaurus* (Psittacosauridae) and ornithomimids.

Bayn Dzak (early Upper Cretaceous): entire specimens of *S. viminocaudus*(= *P. grangeri*, Ankylosauridae) in association with

Protoceratops (Protoceratopsidae) and ornithomimids.

Sheeregeen Gashoon (Upper Cretaceous): *Syrmosaurus disparoserratus*(= *Talarurus plicatospineus*, Ankylosauridae) in association with ornithomimids, hadrosaurs, sauropods and carnosaurs.

Bayn Shireh (Upper Cretaceous): *Talarurus plicatospinaeus* (sic).

The faunal associations at these locations are examined in relation to their ages, and then are compared to the Upper Cretaceous fauna and ankylosaurs of Montana and Alberta. There are close similarities between *T. plicatospinaeus* (sic) and *Ankylosaurus* (Ankylosauridae). Because ankylosaurs appear much earlier in Asia then North America, it is concluded that they migrated to North America during the Upper Cretaceous.

284 MALEEV, E.A., 1952. A new family of armoured dinosaurs from the Upper Cretaceous of Mongolia. Comptes Rendus de l'Academie de Sciences de l'URSS, Akademia Nauk SSSR, Doklady, v. 87(1), p. 131-134, illus., 8 refs., (Russian).

During 1946 to 1949, the remains of several new armoured dinosaurs were found in Mongolia which prompted the formation of the new family Syrmosauridae(= Ankylosauridae). From the lower horizon of the Upper Cretaceous of Bayn Dzak, the author describes the nearly complete type specimen of *Syrmosaurus viminocaudus*(sic) gen. et sp. nov.(= *Pinacosurus grangeri*, Ankylosauridae), which was found in association with *Protoceratops* (Protoceratopsidae) and ornithomimids. It is considered the earliest Upper Cretaceous ankylosaur. From the Upper Cretaceous locality of Sheeregeen Gashoon a fragment of dentary with teeth is classified as *Syrmosaurus disparoserratus* sp. nov.(= *Talarurus plicatospineus*), while a fragment from the Lower Cretaceous site of Ulan Osh is considered *Syrmosaurus*(= *Pinacosaurus* or *Talarurus*) sp. This new family of ankylosaurs is compared to ankylosaurs from North America.

285 MALEEV, E.A., 1952. A new ankylosaur from the Upper Cretaceous of Mongolia. Comptes Rendus de l'Academie de Sciences de l'URSS, Akademiia Nauk SSSR, Doklady, v. 87(2), p. 273-276, illus., 9 refs., (Russian).

Talarurus plicatospineus gen. et. sp. nov. (Ankylosauridae) from the Upper Cretaceous Bayn Shireh locality in Mongolia is described. It is compared to other ankylosaurs and seen to differ from these other forms in having: 1) a flatter, narrower skull; 2) Keeled armour plates unlike any ankylosaurs except Ankylosaurus; and 3) unique corrugated spines that form the external ornament of the armour.

286 MALEEV, E.A., 1953. Discoveries of new armoured dinosaurs in Mongolia.

Priroda, no. 2, p. 109-112, illus., (Russian).

This article reports the finding of ankylosaurs in the upper chalk formations of Mongolia during the paleontological expeditions of the Akademiia Nauk SSSR from 1946 - 1949. Specimens of the Syrmosauridae(=Ankylosauridae) were found in Bayn Dzak, Sheeregeen Gashoon, and Ulan Osh. Specimens of the Ankylosauridae were also found for the first time in Central Asia. It is suggested that Asia was the center of origin for the ankylosaurs.

287 MALEEV, E.A., 1954. A new cheloniform reptile in Mongolia. Priroda, no. 3, p. 106-108, illus., no refs., (Russian).

The type specimen of a new large turtle, *Therizinosaurus cheloniformis* gen. et sp. nov, from the Upper Cretaceous of the Nemegt Basin of Mongolia is described and placed within the new family Therizinosauridae. These turtles are morphologically similar to the giant sea turtles of the family Protostegidae and are compared to members of this family found in Europe and North America. (Note: *Therizinosaurus* is now known to be a theropod.

288 MALEEV, E.A., 1954. Armoured dinosaurs of the Upper Cretaceous of Mongolia. *In* Cretaceous and Lower Vertebrates of Mesozoic Continental Deposits. Travaux de l'Institute Paleozoologique de l'Academie des Sciences de l'URSS, v. 48, p. 142-170, illus., 18 refs., (Russian).

This paper discusses ankylosaurs of the family Syrmosauridae (=Ankylosauridae) collected from the Upper Cretaceous deposits of Mongolia. *Syrmosaurus viminicaudus(=Pinacosaurus grangeri)* from Bayn Dzak, *Syrmosaurus(=?)* sp., and *S. disparoserratus(=Talarurus plicatospineus)* from Sheeregeen Gashoon are described.

289 MALEEV, E.A., 1955. Carnivorous dinosaurs of Mongolia. Priroda, no. 6, p. 112-115, illus., no refs., (Russian).

During the Paleontological Expeditions of the Akademiia Nauk SSSR to Mongolia from 1946 to 1949, several large tyrannosaurs were collected from Upper Cretaceous strata. These included *Tyrannosaurus(=Tarbosaurus) baatar* (Tyrannosauridae), which is similar to *T. rex* from North America, and the new genus *Tarbosaurus*, which resembles *Gorgosaurus sternbergi(=Albertosaurus libratus*, Tryannosauridae) and *G.(=A.) libratus* from North America. This article describes *Tarbosaurus* and reconstructs in some detail the possible characteristics of its morphology and behaviour.

290 MALEEV, E.A., 1955. Giant carnivorous dinosaurs of Mongolia. Academii Nauk SSSR, Doklady, v. 104(4), p. 634-637, illus., 5 refs., (Russian).

The skull and some cervical vertebrae of *Tyrannosaurus*(=*Tarbosaurus*) *baatar* sp. nov. (Tyrannosauridae), collected in 1946 from Nemegt in the southern Gobi by the Mongolian Paleontological Expedition of the Academiia Nauk SSSR are described.

291 MALEEV, E.A., 1955. New carnivorous dinosaurs from the Upper Cretaceous of Mongolia. Comptes Rendus de l'Academie de Sciences de l'URSS, Akademiia Nauk SSSR, Doklady, v. 104(5), p. 779-783, illus., 5 refs., (Russian).

The skulls of new carnivorous dinosaurs (Tyrannosauridae) collected by the Mongolian Paleontological Expeditions of the Academiia Nauk SSSR between 1948 and 1949 in Nemegt, Altan-Ula and Tsagan Ula are described. These are: *Tarbosaurus efremovi* (=*baatar*) gen. et sp. nov. (Tyrannosauridae), *Gorgosaurus lancinator* sp. nov.(=*Tarbosaurus baatar*), and *Gorgosaurus*(=?*Tarbosaurus*) *novojilovi* sp. nov.

292 MALEEV, E.A., 1956. Armoured dinosaurs of the Upper Cretaceous of Mongolia. *In* Contributions on Amphibian and Reptiles. Travaux de l'Institute Paleozoologique de l'Academie des Sciences de l'URSS, v. 62, p. 51-91, illus., 27 refs., (Russian).

The ankylosaurs (Ankylosauridae) of Mongolia are discussed. A detailed analysis of *Talarurus plicatospineus* from Bayn Shireh and *Dyoplosaurus giganteus* sp. nov.(=*Tarchia gigantea*) from Nemegt are included.

293 MALEEV, E.A., 1964. On the brain of carnivorous dinosaurs. Paleontologicheskii Zhurnal, no. 2, p. 141-143, 7 refs., (Russian).

This paper describes cranial endocasts made using the skulls of *Tarbosaurus efremovi*(=*baatar*) and *Tyrannosaurus rex* (Tyrannosauridae). Based on these casts, the author describes certain features of the brains of carnivorous dinosaurs, and compares them to the size and structure of the brains of several other groups of dinosaurs.

294 MALEEV, E.A., 1974. Giant carnosaurs of the family Tyrannosauridae. *In* Faunas and Biostratigraphy of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 1, p. 132-191, 366, illus., 87 refs., (Russian with English summary).

Posthumous article edited and prepared for press by A.K. Rozhdestvensky and S.M. Kurzanov. This paper includes only the first few chapters of an unfinished monograph on Mongolian carnosaurs.

For the first time a detailed morphology of Asiatic carnosaurs (after *Tarbosaurus*, Tyrannosauridae) is given. A bibliography of Jurassic and Cretaceous carnosaurs is included.
(Annotation from English summary by journal)

295 MARTINSON, G.G., SOCHAVA, A.V. and CH.M. KOLESNIKOV, 1971. Fossil dinosaur eggs from the Gobi Desert. Akademia Nauk SSSR, Vestnik, v. 7, p. 95-98, illus., no refs., (Russian).

The structure and size of Upper Cretaceous fossil dinosaur eggs from Algoy Ulan Tsav in the northern Gobi Desert of Mongolia are discussed and compared to fossil eggs known from Bayn Dzak (Mongolia) and southern France. The eight varieties of shell found at Algoy Ulan Tsav are all classified as "ornithoid" and are compared to the eggs of birds, crocodiles and turtles.

296 MARYANSKA, TERESA, 1970. Remains of armoured dinosaurs from the uppermost Cretaceous in Nemegt Basin, Gobi Desert. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part II. Palaeontologia Polonica, no. 21, p. 23-32, illus., 16 refs.

Two fragmentary skeletons of ankylosaurs from the Upper Cretaceous of Altan Ula IV, Nemegt Basin (Mongolia) are described. These are identified as *Dyoplosaurus giganteus*(=*Tarchia gigantea*, Ankylosauridae) and *Dyoplosaurus* sp.(=*Tarchia giganteus*).

297 MARYANSKA, T., 1971. New data on the skull of *Pinacosaurus grangeri* (Ankylosauria). *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part III. Palaeontologia Polonica, no. 21, p. 45-56, illus., 27 ref.

The skull of *Pinacosaurus grangeri* (Ankylosauridae), from the Upper Cretaceous of Bayn Dzak, Mongolia is described.

298 MARYANSKA, T., 1977. Ankylosauridae (Dinosauria) from Mongolia. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part VII. Palaeontologia Polonica, no. 37, p. 85-151, illus., 137 refs.

This article reviews as well as gives new data on the Asian Ankylosauridae collected by the Polish-Mongolian Paleontological Expeditions in the Mongolian People's Republic between 1963 and 1971. All described Asian ankylosaurids are listed with their original and current identifications, Museum catalogue numbers, collection localities, associated vertebrate fauna, formations and presumed ages.

A revised diagnosis of all Mongolian ankylosaurids is attempted. *Heishansaurus pachycephalus* is now considered to be nomem dubium.

The genus *Syrmosaurus* and the family Syrmosauridae are eliminated.

Saichania chulsanensis gen. et sp. nov. (Ankylosauridae) from the Barun Goyot Formation (?middle Campanian) of Khulsan, Mongolia and the Upper Cretaceous Khermeen Tsav "Formation" (=Barun Goyot Formation) of Khermeen Tsav II, Mongolia, is described. *Tarchia kielanae*(=*gigantea*) gen. et sp. nov. (Ankylosauridae) from the Barun Goyot Formation of Khulsan, Mongolia is also described. In addition, an ossified conchal system in the nasal cavity of *S. chulsanensis*, a unique feature among the extinct lower tetrapods, is examined.

A morphological (and possibly phylogenetic) sequence of the Mongolian Ankylosauridae, beginning with an unnamed Early Cretaceous specimen from Khoboor, through *Talarurus*, *Pinacosaurus*, *Saichania* and "*Dyoplosaurus*" (=*Euoplocephalus*) is presented. A common origin for the Ankylosauria and the Stegosauria from the Pseudosuchia, independent from the bipedal and cursorial line of Ornithopoda, is suggested.

299 MARYANSKA, T. and OSMOLSKA, H., 1974. Pachycephalosauria, a new suborder of ornithischian dinosaurs. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part V. Palaeontologia Polonica, no. 30, p. 45-102, illus., 43 refs.

Pachycephalosauria, a new suborder of ornithischian dinosaurs which includes the family Pachycephalosauridae, is proposed and defined. Three new genera and species from the Upper Cretaceous Pachycephalosauridae of Mongolia are described. These are:

Tylocephale gilmorei gen. et sp. nov. (Pachycephalosauridae), Barun Goyot Formation, Khulsan, Nemegt Basin;
Prenocephale prenes gen. et sp. nov. (Pachycephalosauridae), Nemegt Formation, Nemegt, Nemegt Basin and;
Homalocephale calathocercos gen. et sp. nov. (Pachycephalosauridae), Nemegt Formation, Nemegt, Nemegt Basin.

Descriptions of osteology of the skull and postcranial skeletons are presented. The adaptations, mode of life, sexual dimorphism and possible phylogeny of the pachycephalosaurs is also discussed.

300 MARYANSKA, T., and OSMOLSKA, H., 1975. Protoceratopsidae (Dinosauria of Asia. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part VI. Palaeontologia Polonica, no. 33, p. 133-181, illus., 67 refs.

This paper describes new protoceratopsid material from the Gobi Desert, Mongolia.

Bagaceratops rozhdestvenskyi gen. et sp. nov. (Protoceratopsidae) from the Upper Cretaceous (?Middle Campanian)

Khermeen Tsav "Formation" (Khermeen Tsav I and II) and ? *Protoceratops kowlowskii* sp. nov. (Protoceratopsidae) from the (?Middle Campanian), Barun Goyot Formation (Khulsan, Nemegt Basin) are described and illustrated. New osteological data is given on *Microceratops gobiensis* (Protoceratopsidae).

None of the protoceratopsids are considered to be ancestral to the Ceratopsidae. The Psittacosauridae is not considered to be ancestral to either the Protoceratopsidae or the Ceratopsidae.

A table is given listing all described protoceratopsids in Asia, their locality, formation, age and associated vertebrate fauna.

301 MARYANSKA, T. and OSMOLSKA, H., 1979. Some aspects of the hadrosaurian cranial anatomy. Lethia, v. 12, p. 265-273, 23 refs.

The authors describe the supraorbital bones in *Saurolophus angustirostris* (Hadrosauridae) and suggest that these bones may be present in all hadrosaurs. Frontal-nasal and premaxillary-nasal fontanelle are distinguished in hadrosaurs. These fontanellae are suggested to be connected to growth and are considered to be responsible for the variability of crest structures. New data suggests the presence of a cartilaginous diverticulum nasi within the circumnarial depression of *S. angustirostus*. It is proposed that the nasal diverticulum had a respiratory and/or thermoregulatory function.

302 MARYANSKA, T. and OSMOLSKA, H., 1981. Cranial anatomy of *Saurolophus angustirostris* with comments on the Asian Hadrosauridae (Dinosauria). *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part IX. Palaeontologia Polonica, no. 42, p. 5-23, illus., 49 refs.

The cranial anatomy of *Saurolophus angustirostris* (Hadrosauridae) is described based on material from the Upper Cretaceous Nemegt Formation of the Nemegt Basin, Altan Ula, and Tsagan Khushu, Mongolia. The Hadrosauridae of Asia are discussed and a list of all described Asian hadrosaurid taxa is included.

303 MARYANSKA, T. and OSMOLSKA, H., 1981. First lambeosaurine dinosaur from the Nemegt Formation, Upper Cretaceous, Mongolia. Acta Palaeontologica Polonica, v. 26(3-4), p. 243-255, illus., 20 refs.

The new genus and species *Barsboldia sicinskii* (Hadrosauridae) is created, with its long, club-like neural spines being its most striking feature.

304 MARYANSKA, T. and OSMOLSKA, H., 1983. Some implications of hadrosaurian postcranial anatomy. Acta Palaeontologica Polonica, v. 28(1-2), p. 205-207, 8 refs.

The vertebral column and the pelvo-sacral contact of the hadrosaurian skeleton is discussed. This is based largly on previous work done by the authors on *Saurolophus angustirostris* (Hadrosauridae) from the Upper Cretaceous Nemegt Formation of Mongolia.

305 MATTHEW, W.D., and GRANGER, W., 1926. Important results of the Central Asiatic Expedition: the most significant fossil finds of the Mongolian Expedition. Natural History, v. 26(5), p. 532-534, no refs.

Popular description of the finds made by the Central Asiatic Expedition to Mongolia by the American Museum of Natural History.

306 McKENNA, MALCOLM C., 1962. Studies of the natural history of the Mongolian People's Republic and adjacent areas made by the American Museum of Natural History. Newsletter, Mongolian Society, v. 1(3), p. 31-35, no refs.

This article briefly outlines the history of scientific exploration conducted in the Mongolian People's Republic and adjacent areas by the American Museum of Natural History.

307 McKENNA, M.C., 1962. Papers mainly on Mongolian natural history published by the Americian Museum of Natural History. Newsletter, Mongolian Society, v. 1, p. 36-45, 151 refs.

This paper is a list of 151 articles on Mongolian natural history, including Upper Cretaceous fossil discoveries, based on the results of field work accomplished by the Central Asiatic Expeditions of the American Museum of Natural History.

308 McKENNA, M.C., 1969. The origin and early differentiation of therian mammals. Annals of the New York Academy of Sciences, v. 167, p. 217-240, 91 refs.

The author attempts to review the history of therian differentiation through the Mesozoic and Cenozoic. The Mongolian Cretaceous Eutheria from Bayn Dzak are reviewed. The dental formulae of *Zalambdalestes* (Zalambdalestidae), *Kennalestes* (Kennalestidae), *Deltatheridium* and *Deltatheroides* (Deltatheridiidae) are examined and the position of these genera in therian evolution is discussed.

309 McKENNA, M.C., 1975. Toward a phylogenetic classification of the Mammalia. *In* Phylogeny of the Primates (Luckett, W.P. and Szalay, F.S., editors). New York: Plenum Press, p. 21-46.

This article is a discussion of mammalian phylogeny. ***Kennalestes*** (Kennalestidae) and ***Asioryctes*** (Palaeoryctidae[=Kennalestidae]) are placed in the Ernotheria. The dentition of ***Kennalestes***, ***Asioryctes***, ***Zalambdalestes*** (Zalambdalestidae), ***Deltatheridium*** and ***Deltatheroides*** (Deltatheridiidae) are discussed. ***Zalambdalestes*** is considered cladistically to be a Cretaceous lagomorph. The marsupial-like features of ***Deltatheroides*** and ***Deltatheridium*** are attributed to both plesiomorphy and convergence. A new preliminary classification of mammals is presented.

310 McKENNA, M.C., MELLET, J.S. and SZALAY, F.S, 1971. Relationships of the Cretaceous mammal ***Deltatheridium***. Journal of Paleontology, v. 45, p. 441-442, 12 refs.

The dental formula of ***Deltatheridium*** (Deltatheridiidae) from the Upper Cretaceous Djadokhta Formation of southern Mongolia is revised altering its position in mammalian evolution.

311 MERKULOVA, N.N., 1978. A new *Trionyx* from Nemegt, Mongolia.(abstract) Moskovskoye Obshchestvo Ispytateley Prirody. Byulleten, Otdel Geologicheskii, v. 53(3), June, p. 156, no refs., (Russian).

This article briefly discusses the importance of a specimen of *Trionyx* sp. (Trionychidae) discovered in 1948 in Upper Cretaceous deposits of Nemegt, Mongolia. This nearly complete turtle carapace is the earliest known example of this genus in Asia, and is similar to turtles known from the Upper Cretaceous of North America, as well as later forms from China.

312 MIROLYUBOV, YU. G., 1972. The Cretaceous System: the East-Asian region of continental sedimentation. *In* Gologiya Severo-Vostochnoy Azii. Tom 2, Stratigrafiya i Paleogeografiya (Vereshchagin, V.N., et al., editors), Leningrad: Izd. Nedra Leningrad. Otd., p. 329-334.

Not seen

313 MLYNARSKI, MARIAN WERMUTH, 1971. Die Schild Kroten. *In* Grzimeks Tierleben (Grzimek, B., editor). Zurich: Kindler Verlag AG, v. 6, p. 75-127.

Not seen

314 MLYNARSKI, M.W., 1972. *Zangeriia testudinimorpha* gen. et sp. nov., a primitive land tortoise from the Upper Cretaceous of Mongolia. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part IV.

Palaeontologia Polonica, no. 27, p. 85-92, illus., 11 refs.

Zangerlia testudinimorpha gen. et sp. nov.(Dermatemydidae) from the Upper Cretaceous Lower Nemegt Beds (Barun Goyot Formation) of Nemegt and Khulsan in the Nemegt Basin of Mongolia is described. These tortoises were adapted to a terrestrial mode of life but preserved all the features of the primative aquatic Dermatemydidae. Comments are also made on the systematics and ecology of Mesozoic land tortoises.

315 MLYNARSKI, M.W. and NARMANDACH, PAGAN, 1972. New turtle remains from the Upper Cretaceous of the Gobi Desert, Mongolia. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part IV. Palaeontologia Polonica, no. 27, p. 95-101, illus., 6 refs.

New turtles collected by the 1970 Polish-Mongolian Palaeontological Expedition are reported from the Upper Cretaceous Nemegt Formation of Nemegt. The following turtles were collected: *Mongolemys elegans* (Dermatemydidae), *Zangerlia*, two forms of *Trionyx* (Trionychidae), unidentified forms with a strongly serrated ridge on the carapace, and large specimens of the suborder Amphicheliyda.

A specimen assigned to *Mongolemys* sp. from the Upper Cretaceous of Sheeregeen Gashoon was also collected.

316 MOOK, CHARLES C., 1924. A new crocodilian from Mongolia. American Museum Novitates, no. 117, p. 1-5, no refs.

Shamosuchus djadochtaensis gen. et sp. nov. (Paralligatoridae) from Shabarakh Usu(=Bayn Dzak) Djadokhta Formation, is described. The age is given as Lower Cretaceous, although it is now considered to be Upper Cretaceous.

317 MORRIS, FREDERICK KUHNE, 1933. Date of the dinosaur eggs. Proceedings of the Geological Society of America (1933), p. 452-453, no refs., (abstract).

The date of the Djadokhta Formation is discussed in relation to its index fossils (*Protoceratops* (Protoceratopsidae) and primitive mammals) and geological features. The age of the Formation is suggested by this data to be Upper Cretaceous.

318 MORRIS, F.K., 1936. Central Asia in Cretaceous time. Bulletin of the Geological Society of America, v. 47, p. 1477-1534, illus., 118 refs.

This paper is primarily a geological review of Central Asia in the Cretaceous. The following Upper Cretaceous "formations" and their associated fauna are discussed: Djadokhta, Iren Dabasu, Sairim, Tairum

Nor, Baiying Bologai, and Dohoin Usu.

319 MORRIS, W.J., 1970. Review of the Results of the Polish-Mongolian Palaeontological Expeditions, Part I (Palaeontologia Polonica, no. 19, 191p., 1969). Journal of Paleontology, v. 44(1), p. 169-170, no refs.

Expedition review

320 NAMNANDORZHI, O., 1955. Footprints of a gigantic reptile in Mongolia. Priroda, no. 5, p. 110-111, illus., no refs., (Russian).

This brief article describes two series of fossil footprints found near Saizhah mountain in Central Mongolia by a geological prospecting crew. Fourteen tridactyl tracks are suggested to be those of an iguanodont, while twenty "elephant-like" prints may have been from some other form of ornithischian. The close relationship between the tracks is interpreted as possible evidence of pursuit. No age or formation is mentioned.

321 NESOV, L.A., 1977. A new genus of two-clawed turtles from the Upper Cretaceous of Karakalpakia. Paleontological Journal, no. 1, March, p. 103-114, illus., 22 refs.

USSR

322 NESOV, L.A., 1978. An archaic Late Cretaceous turtle from western Uzbekistan. Paleontological Journal, v. 12(4), p. 515-519, illus., 9 refs.

USSR

323 NESOV, L.A., 1984. Upper Cretaceous pterosaurs and birds from Central Asia. Paleontological Journal, v. 18(4), p. 38-49.

USSR

324 NESOV, L.A. and TROMINOV, B.A., 1979. The most ancient insectivore from the Cretaceous of Uzbekistan. Akademia Nauk SSSR, Doklady, v. 247(4), p. 952-954, illus., 13 refs., (Russian).

USSR

325 NESOV, L.A. and VERZILIN, N.N.,, 1981. The remains of turtles from the Aptian-Albian deposits of the Trans Altai Gobi of Mongolia, and the

condition of their burial. *In* The Fossil Vertebrates of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 15, p. 13-26, 124, illus., (Russian with English summary).

Lower Cretaceous

326 NIKOLOFF, I. and HUENE, F., 1966. Neue Vertebratenfunde in der Wuste Gobi. Neues Jahrbuch fur Geologie und Palaontologie Abhandlungen, v. 11, p. 691-694, no refs.

327 NOPCSA, F., 1930. Zur systematischen Stellung drieier von Wiman aus China beschriebener fossiler Schildkroten. Centralblatt fur Minerologie, Geologie, and Paleontologie, Abteilug B., p. 510-512, no refs.

328 NOVODVORSKAYA, I.M., 1974. Taphonomy of occurrences of Lower Cretaceous vertebrates of Hkyren-Dukh. *In* Mesozoic and Cenozoic Faunas and Biostratigraphy of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 1, p. 305-315, (Russian).

Lower Cretaceous

329 NOVOJILOV, N.I., 1954. Compendium of works concerning the paleontological problems in the Mongolian People's Republic. Akademiia Nauk SSSR, Trudy Mongoloskaia Komissiia, v. 59, p. 33-46, 10 refs., (Russian).

330 NOWINSKI, ALEKSANDER, 1971. *Nemegtosaurus mongoliensis* gen. nov., sp. nov. (Sauropoda) from the uppermost Cretaceous of Mongolia. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part III. Palaeontologia Polonica, no. 25, p. 57-81, illus., 52 refs.

The skull of *Nemegtosaurus mongoliensis* gen. et sp. nov. (Atlantosauridae - now in Diplodocidae) from the Nemegt Formation (Campanian or Maastrichtian), of the Nemegt Basin, Mongolia is described. This specimen has the first complete sclerotic ring to be described in the suborder Sauropoda.

331 OBRUPRCEV, D.U., 1967. Agnatha, Pisces. *In* Fundamentals of Paleontology (Orlov, Yu.I., editor). English edition. Jerusalem: Israel Program for Scientific Translations, v. 11, 825 pp.

An encyclopedia of fossil fish from the USSR, Mongolia and parts of China.

332 OCHEV, V.G., 1976. Taphonomical types of find-localities of Mesozoic tetrapods as indicators of paleolandscapes. Moskovskoe Obshchestvo Isptatelei Prirody. Byulleten, Odtel Geologicheskii, v. 51(4), August, p. 139-145, 12 refs., (Russian).

Using the Upper Cretaceous deposits of the Nemegt Basin (Mongolia) and the Triassic deposits of southern Priuralye as models, the author has attempted to correlate typical taphonomical complexes with specific depositional environments. The taphonomical data obtained from Upper Cretaceous hadrosaur burials in Mongolia is utilized for reconstructing palaeoenvironments.

333 OLSHEVSKY, GEORGE, 1978. The archosaurian taxa (excluding the Crocodylia). Mesozoic Meanderings, v. 1(1), p. 1-50.

A complete listing of all dinosaur species (plus pterosaurs and thecodonts) for reference purposes. Synonyms and earliest references are also included.

334 ORLOV, J.A., 1952. The work of the Soviet palaeontologists in Central Asia. Priroda, no. 6, p. 78-88, illus., no refs., (Russian).

This article is a review of the fossils collected from Cretaceous and Tertiary deposits in the Gobi Desert (Mongolia) by the Paleontological Expedition of the Akademiia Nauk SSSR from 1946 to 1949. In the Upper Cretaceous deposits west of Nemegt, hadrosaurs and carnosaurs were collected, as well as turtles, fish and crocodiles. The fauna of the Lower Cretaceous is also described and the ecology and environment of this period is discussed. No link between Cretaceous and Tertiary deposits or fauna were discovered.

335 ORLOV, J.A., (ed.), 1954. Crustaceans and lower vertebrates of Mezozoic continental deposits. Travaux de l'Institute Paleozoologique de l'Academie des Sciences l'URSS, v. 48, p. 1-198., (Russian).

Not seen

336 OSBORN, HENRY FAIRFIELD, 1922. Proving China the mother of the continents. Asia, v. 22(9), p. 721-724.

This article discusses the work of the Third Asiatic Expedition. Brief mention is made of the dinosaurs of Iren Dabusu.

337 OSBORN, H.F., 1923. Two Lower Cretaceous dinosaurs of Mongolia. American Museum Novitates, no. 95, p. 1-10, no refs.

The first descriptions of two important Lower Cretaceous Mongolian dinosaurs are presented. These are:
Psittacosaurus mongoliensis, gen. et sp. nov. (Psittacosauridae), from the Lower Cretaceous Ashile Formation, Arts Bogd (Artsa Bogda) Basin, western Mongolia and;
Protiguanodon mongoliense, gen. et sp. nov. (Psittacosauridae), from the Lower Cretaceous Ondai Sair Formation at Ussuk, Tsagan Nor Basin, western Mongolia.

338 OSBORN, H.F., 1923. Giant beasts of three million years ago. Asia, v. 23(9), p. 625-630.

This article discusses *Baluchitherium* as well as *Protoceratops* (Protoceratopsidae).

339 OSBORN, H.F., 1924. Three new Theropoda, *Protoceratops* zone, Central Mongolia. American Museum Novitates, no. 114, p. 1-2.

The type specimens of *Velociraptor mongoliensis* (Dromaeosauridae), *Saurornithoides mongoliensis* (Troodontidae) and *Oviraptor philoceratops* (Oviraptoridae), from the Djadokhta Formation at Shabarakh Usu (Bayn Dzak) are described and compared to North American small theropods.

340 OSBORN, H.F., 1924. *Psittacosaurus* and *Protiguanodon*: two Lower Cretaceous iguanodontids from Mongolia. American Museum Novitates, no. 127, p. 1-27, no refs.

A detailed description of the type specimens of *Psittacosaurus mongoliensis* and *Protiguanodon mongoliense*, two Lower Cretaceous iguanodonts (Psittacosauridae) of Mongolia.

341 OSBORN, H.F., 1926. Frontispiece: A dinosaur skull in the bedrock at Shabarak Usu, Mongolia. Natural History, v. 26(5), p. 439, (photograph only).

342 OSBORN, H.F., 1929. Interruption of Central Asiatic exploration by the American Museum of Natural History. Science (New Series), v. 70, p. 291-294, no refs. [Also in: N.Y. Herald-Tribune, July 16, 1929].

The author discusses the interruption of the explorations of the American Museum of Natural History in Central Asia by the Society for the Preservation of Cultural Objects, Beijing, China. A two page statement on the situation by Dr. Roy Chapman Andrews is included in the body of the article.

343 OSBORN, H.F., 1930. Ancient vertebrate life of Central Asia. Discoveries of the Central Asiatic Expedition of the Museum of Natural History in the years 1921 - 1929. Extrait du Livre Jubilaire, Centenaire de la Societe Geologique de France, v. 2, p. 519-543, no refs.

This article is mainly a geological discussion of the deposits mapped in Central Asia as part of the Central Asiatic Expeditions. Some vertebrate fossils are mentioned as deposit benchmarks.

344 OSBORN, H.F., 1932. Reply to letter of Chang Chi (1932) on controversy of Central Asiatic Expeditions and Chinese government. Science (New Series), v. 76(1980), p. 539-540, no refs.

This article is a reply to the letter of 1932 by Mr. Chan Chi on the breakdown of relations between the National Committee for the Preservation of Antiquities and the American Museum of Natural History. Dr. Osborn defends the position taken by Dr. R.C. Andrews of breaking off relations with the National Committee in favour of working with the new government of Manchoukuo.

345 OSMOLSKA, HALSZKA, 1972. Preliminary note on a crocodilian from the Upper Cretaceous of Mongolia. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part IV. Palaeontologia Polonica, no. 27, p. 43-47, illus., 17 refs.

Gobiosuchus kielanae gen. et sp. nov., Gobiosuchidae fam. nov. (?Protosuchia), from the Upper Cretaceous Djadokhta Formation at Bayn Dzak, Mongolia is described.

346 OSMOLSKA, H., 1976. New light on the skull anatomy and systematic position of *Oviraptor*. Nature, v. 262(5570), p. 683-684, illus., 17 refs.

The skull anatomy and systematics of *Oviraptor* (Oviraptoridae) are discussed based on skull material from the Khermeen Tsav "Formation" (?Upper Campanian-?Middle Maastrichtian) and the Nemegt Formation (?Upper Campanian-?Lower Maastrichtian) of the Gobi Desert, Mongolia.

Oviraptor has many unusual non-dinosaurian, para-avian characters such as the separation of the pterygopalatine complex from the jugal arch, the pneumatization of the skull, possible enlargement of the brain with simultaneous shortening of the olfactory tracts as well as some structural characteristics of the mandible. The skull of *Oviraptor* is basically similar to *Caenagnathus collinsi* and *C. sternbergi* which have been assigned to birds. *Oviraptor* and *Caenagnathus* should be assigned to the family Caenagnathidae which may represent a Cretaceous continuation of the same lineage that gave rise to birds. The author suggests that it is not possible to assign the Caenagnathidae to any of the known theropod infraorders and a new suprafamilial taxon will have to be established.

347 OSMOLSKA, H., 1980. The Late Cretaceous vertebrate assemblages of the Gobi Desert, Mongolia. *In* Ecosystemes Continentaux du Mesozoique (Taquet, Phillippe, editor) Memoires de la Societe Geologique de France, no. 139, p. 145-150, illus., 37 refs.

The faunal assemblages of the Djadokhta Formation (?Lower Campanian) at Bayn Dzak, the Barun Goyot Formation (?Middle Campanian) and the Nemegt Formation (?Upper Campanian-?Middle Maastrichian) at North Nemegt are discussed. This information is collected in tables for each of the formations and then each of these are compiled into one large table for comparative purposes. These formations represent an almost continuous series of continental sediments from the ?Lower Campanian to the Maastrichtian. The climate of Mongolia during each of these formations is speculated upon and discussed in light of the faunal differences between Asia and North America during the same time periods.

348 OSMOLSKA, H., 1981. Coossified tarsometatarsi in theropod dinosaurs and their bearing on the problem of bird origins. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part IX. Palaeontologia Polonica, no. 42, p. 79-95 , illus., 24 refs., (English with Polish summary).

Limb remains from two small theropod dinosaurs (*Elmisaurus rarus* gen. et sp. nov., Elmisauridae n. fam.), and "theropod gen. et sp. indet." from the Nemegt Formation, Mongolia, display fused tarsometatarsi. This is considered additional evidence for the theropod origin of birds.

349 OSMOLSKA, H., 1982. *Hulsanpes perlei* n. gen., n. sp. (Deinonychosauria, Saurischia, Dinosauria) from the Upper Cretaceous Barun Goyot Formation of Mongolia. Neues Jahrbuch fur Geologie und Palaontologie, Mh, v. 7, p. 440-448, 12 refs.

Hulsanpes perlei gen. et sp. nov. (?Dromaeosauridae, Deinonychosauria) from the Barun Goyot Formation at Khulsan, Nemegt Basin, Mongolia is described from an incomplete pes of an immature deinonychosaurid.

350 OSMOLSKA, H. and RONIEWICZ, E., 1970. Deinocheiridae, a new family of theropod dinosaurs. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part II. Palaeontologia Polonica, no. 21, p. 5-19, illus., 19 refs.

Deinocheirus mirificus gen. et sp. nov. (Deinocheiridae fam. nov.) is described. The specimen was collected from the Upper Cretaceous Upper Nemegt Beds (Nemegt Formation), Altan Ula III locality, in the Nemegt Basin of the Mongolian People's Republic. The new family Deinocheiridae is defined on the basis of the gigantic forelimbs of this specimen. The forelimbs are about 240 cm long and tridactyl, all digits being equally developed and terminating in powerful claws.

351 OSMOLSKA, H., RONIEWICZ, E. and R. BARSBOLD, 1972. A new dinosaur, *Gallimimus bullatus* gen. et sp. nov. (Ornithomimidae) from the Upper Cretaceous of Mongolia. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part IV. Palaeontologia Polonica, no. 27, p. 103-143, illus., 19 refs.

A detailed description of *Gallimimus bullatus* gen. et sp. nov. (Ornithomimidae) from the ?upper Campanian or ?lower Maastrichian Nemegt Formation is presented. This ornithomimid was collected from Tsagan Khushu in the Nemegt Basin of the Gobi Desert.

352 OSTROM, JOHN H., 1966. Functional morphology and evolution of the ceratopsian dinosaurs. Evolution, v. 20, p. 290-308, 14 refs.

The evolution and the functional morphology of the Ceratopsia are discussed. Some cranial features (beak, dentition, head size, frill and mandibular mechanics) are described and compared between genera. *Protoceratops* (Protoceratopsidae) is included in the discussion.

353 PARKER, NEAVE: see SWINTON, W.E. and PARKER, N.

354 PAUL, GREGORY S., 1984. The segnosaurian dinosaurs: relics of the prosauropod-ornithischian transition? Journal of Vertebrate Paleontology, v. 4(4), p. 507-515, illus., 45 refs.

The morphologies of *Segnosaurus* and *Erlikosaurus* (Segnosauridae) are discussed and compared to theropods and prosauropods. Barsbold and Perle (1980) considered them to be aberrant members of the theropoda and erected the new infraorder Segnosauria for them. However the author of this article points out that these spatulate-toothed, herbivorous, four-toed segnosaurs clearly fall outside of the boundaries of the Theropoda as set by Romer (1966). A cladistic comparision of segnosaurs with thecodonts and early Triassic dinosaurs suggests that the segnosaurs are phylogenetic intermediates between herbivorous prosauropods and early ornithischians. The segnosaurs are considered to represent a clade between prosauropods and ornithischians. The segnosaurs strengthen the hypothesis of dinosaur monophyly.

355 PAVLOWA, MARIE V., 1935. Remarkable paleontological discoveries by American expedition to Mongolia. Advances in Modern Biology, v. 4, p. 136-143, illus., no refs., (Russian).

This article is a summary of the findings of the 3rd Central Asiatic Expedition of the American Museum of Natural History.

356 PEARL, R.M., 1976. Dinosaur eggs. Earth Science, v. 29(2), p. 91-92, illus., no refs.

This article gives a brief description of the discovery of *Protoceratops* eggs at Bayn Dzak, Mongolia in 1932. The article is illustrated with a drawing of a bipedal *Protoceratops* (Protoceratopsidae).

357 PEARL, R.M., 1976. End of the dinosaurs. Earth Science, v. 29(3), June, p. 127-132, illus.

358 PERLE, A. 1977. The first finding of the *Alectrosaurus* from the Late Cretaceous in Mongolia. Problems of Geology in Mongolia, v. 3?, p. 104-113, 12 refs.

359 PERLE, A. 1979. The Segnosauridae, a new family of theropods from the Late Cretaceous of Mongolia. *In* Mesozoic and Cenozoic Faunas of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 8, p. 45-55, 123, 148-149, illus., 15 refs., (Russian).

Segnosaurus galbinensis sp. nov. (Segnosauridae n. fam.) from the Upper Cretaceous of Amtgay and Khar Khutul, in southeastern Mongolia is described and the new family Segnosauridae is established.
(Annotation from English summary by journal)

360 PERLE, A., 1981. New Segnosauridae from the Upper Cretaceous of Mongolia. *In* Fossil Vertebrates of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 15, p. 50-59, 124, illus., 9 refs., (Russian with English summary).

Erlikosaurus andrewsi gen. et sp. nov. (Segnosauridae) from the Upper Cretaceous Bayn Shireh Formation of Mongolia is described.

361 PERLE, A., 1985. Comparative myology of the pelvic-femoral region in the bipedal dinosaurs. Paleontological Journal, v.19(1), p. 105-109, illus., 14 refs.

This article is a concise but detailed analysis of the pelvic-femoral musculature and morphology of bipedal saurischians. Based on this analysis, three types of saurischian pelvic structure can be distinguished, and the "opisthopubic" pelvis shows several close similarities to the pelvis of *Archaeopteryx* (Archaeopterygidae). This suggests a close phylogenetic relationship. Diagrams of the pelvic structure and musculature of *Tarbosaurus baatar* (Tyrannosauridae), *Segnosaurus ghalbiensis*(sic) (Segnosauridae) and *Velociraptor mongoliensis* (Dromaeosauridae) are included.

362 PERLE, A., MARYANSKA, T. and H. OSMOLSKA. 1982. *Goyocephale lattimorei* n. gen., n. sp. a new flat-headed pachycephalosaur (Ornithischia, Dinosauria from the Upper Cretaceous of Mongolia. Acta Palaeontologica Polonica, v. 27(1-4), p. 115-127, illus., 7 refs.

Goyocepale lattimorei gen. et sp. nov. (Homalocephalidae) from Boro Khovil, in the southern Gobi Desert is described. It is primitive and probably stratigraphically older than *Homalocephale calathocercos* (Homalocephalidae)(?=Pachycephalosauridae) known from the Upper Cretaceous Nemegt Formation of the Gobi Desert. The diagnosis of *H. calathocercos* is revised.

363 PINGCHANG, SIN, 1930. The Central Asiatic Expedition. Science, v. 71, p. 129-130.

The author has submitted a statement prepared by the Chinese Committee of the Preservation of Archeological Objects outlining their side of the controversy between themselves and the American Museum of Natural History over the agreement allowing the Central Asiatic Expedition to work in Inner Mongolia and transport material back to the United States.

364 PING CHI: see BING ZHI

365 REIF, W.-E., 1980. Review of Lillegraven, J.A., Kielan-Jaworowska, Z. and Clemens, W.A., (editors), 1979. Mesozoic Mammals: The First Two-thirds of Mammalian History. (Berkeley: University of California Press, 312 p.). Zentralblatt fur Geologie und Palaontologie, v. 2, p. 125-126, (German).

Book review

366 RESHETOV, VALERIY YUR'YEVICH and BARSBOLD, R., 1980. Paleontological investigations in Mongolia. Priroda, no. 8(780), p. 36-43, illus., 4 refs., (Russian).

This non-scientific article reviews the major discoveries of the Joint Soviet-Mongolian Paleontological Expedition in the ten years since it began work in Mongolia. A history of the expedition and descriptions of significant Upper Cretaceous mammals and dinosaurs collected during this period are included.

367 RIABININ, A.N. 1925. A mounted skeleton of the gigantic reptile *Trachodon amurense*, sp. nov. Geologicheskii Komitet Izvestia, v. 44(1), illus., (Russian with English summary).

A preliminary description of the hadrosaur now known as *Mandschurosaurus amurensis* (Hadrosauridae).

368 RIABININ, A.N., 1930. *Mandshurosaurus[=Mandschurosaurus] amurensis* nov. gen. nov. sp., a hadrosaurian dinosaur from the Upper Cretaceous of Amur River. Societe Paleontologique de Russie, Memoires, v. 2, p. 1-36, illus., (Russian with English summary).

This article gives a complete description of a hadrosaur skeleton collected from the Upper Cretaceous locality of Belye Kruchi, on the Chinese bank of the Amur River. After comparison with other members of the Hadrosauridae, including *Edmontosaurus* and *Kritosaurus(=Hadrosaurus)* from North America and *Tanius* from China, the specimen is reclassified as *Mandschurosaurus amurensis* gen. et sp. nov. of the Hadrosaurinae.

369 RIABININ, A.N., 1930. On the age and fauna of the dinosaur beds on the Amur River. Memoires de la Societe Russe de Mineralogie (2nd Series), v. 59(1), p. 41-51, illus.

The remains of the dinosaurs *Saurolophus kryshtofopici* (*=angustirostus*) sp. nov. (Hadrosauridae) and *Albertosaurus periculosus* sp. nov.(*=Tarbosaurus baatar*, Tyrannosauridae) as well as the turtle *Aspideretes(=Trionyx)* planicostatus sp. nov. (Trionychidae), are described by the author. This material came from the Upper Cretaceous deposits at the locality of Belye Kruchi on the Chinese bank of the Amur River, which had previously produced *Mandschurosaurus amurensis* (Hadrosauridae). The fossil bed is considered part of the Tsagayan Series corresponding to the Laramie of North America.

370 RIABININ, A.N., 1931. Dinosaurian remains from the Upper Cretaceous of the lower Amur-Daria River. Memoirs de la Societe Russe de Mineralogie (2nd Series), v. 60, p. 114-118, illus.

USSR

371 RIABININ, A.N., 1935. Restes du tortue du Cretace superieur de desert de Kysyl-Koumara. Trav. Inst. Paleozool. Acad. Sci. URSS, v. 4, p. 69-77, illus., (Russian with French summary).

USSR

372 RIABININ, A.N., 1937. A new discovery of dinosaurs in Transbakalia. Ann. Soc. Pal. Russie, v. 11, p. 142-144, illus., (Russia with English summary).

USSR

373 RIABININ, A.N., 1939. Fauna of vertebrates of the Upper Cretaceous of Mongolia - family Syrmosauridae. Work of the Paleontological Institute of Sciences. Akademiia Nauk SSSR, v. 48., (Russian).

Not seen

374 RICH, V. 1979. Hunting Mongolian dinosaurs. Nature, v. 279(5716), p. 754, illus., no refs.

This article is a short discussion of the Polish involvement in the Polish-Mongolian Palaeontological Expeditions.

375 ROMER, A.S., 1966. *Vertebrate Paleontology*, 3rd edition. Chicago: University of Chicago Press, 491 pp., illus.

376 ROMER, A.S., WRIGHT, N.E., EDINGER, T. and R. VAN FRANK, 1962. Bibliography of fossil vertebrates exclusive of North America, 1509 - 1927. Geological Society of America. Memoirs, no. 87, (2 volumes) 1544 pp.

377 ROSE, K.D., 1978. Review of: Results of the Polish-Mongolian Palaeontological Expeditions, Parts II-VI, 1969-1975. Journal of Paleontology, v. 52(1), p. 214-217, 9 refs.

Review of the results of the Polish-Mongolian Palaeontological Expeditions, Parts II-VI, published in Palaeontologia Polonica, v. 21, 25, 27, 30 and 33 from 1971 to 1975.

378 ROZHDESTVENSKY, ANATOLI KONSTANTINOVICH, 1952. A new representative of the duck-billed dinosaurs from the Upper Cretaceous deposits of Mongolia. Academia Nauk USSR, Doklady, v. 86(2), p.

405-408, 5 refs., (Russian).

The nearly complete skeleton of *Saurolophus angustirostris* sp. nov. (Hadrosauridae) was collected in 1948 from the Upper Cretaceous of the Nemegt Basin in the southern Gobi of Mongolia. This new species is described and compared to *Saurolophus osborni* from the Upper Cretaceous of Alberta, as well as to other hadrosaurs. Some aspects of the function and behaviour of hadrosaurs are discussed based on morphology and ecology.

379 ROZHDESTVENSKY, A.K., 1952. The discovery of an *Iguanodon* in Mongolia. Comptes Rendus de l'Academie de Sciences de l'URSS., v. 84(6), p. 1243-1246, illus., 13 refs., (Russian).

The first iguanodont discovered in Asia, *Iguanodon orientalis* sp. nov. (Iguanodontidae), is described. It was collected from Lower Cretaceous deposits of Khamarin Khural of the eastern Gobi, Mongolia.

380 ROZHDESTVENSKY, A.K., 1952. Investigations of Soviet palaeontologists in Central Asia (Mongolian Palaeontological Expedition of the USSR Academy of Sciences). Znanie, p. 1-31, no refs., (Russian).

381 ROZHDESTVENSKY, A.K., 1954. New data on *Psittacosaurus* Cretaceous ornithodonts. Voprosy Geologii Azii, Akademiia Nauk SSSR, v. 2, p. 783-788, illus., 5 refs., (Russian).

The Lower Cretaceous dinosaur family Psittacosauridae, from China and Mongolia, is reviewed. The author concludes that only one valid species exists in this family - *Psittacosaurus mongoliensis*. The relationship of *P. mongoliensis* to Upper Cretaceous hadrosaurs is discussed.

382 ROZHDESTVENSKY, A.K., 1954. Soviet paleontological investigations in Central Asia. VOKS-Bulletin, no. 2(85), p. 36-42, no refs.

This article gives a general history of Soviet vertebrate palaeontological investigations of the Mesozoic and Cenozoic in Central Asia up until 1954. Brief details are included on the various expeditions, the localities they visited and the material they collected.

383 ROZHDESTVENSKY, A.K., 1955. Hunting for dinosaurs. Nuaka i Zhizn', no. 4, p. 24-27, no refs., (Russian).

This non-academic article describes a Soviet paleontological expedition to Mongolia, and relates many of the discoveries of Upper Cretaceous dinosaurs that were made, including the "grave of dinosaurs" at Altan

Ula where ten dinosaurs were collected. A general discussion of the dinosaurs and environment of the Cretaceous is included.

384 ROZHDESTVENSKY, A.K., 1957. Duck-billed dinosaur *Saurolophus* from the Upper Cretaceous of Mongolia. Vertebrata PalAsiatica, v. 1(2), p. 129-149, illus., 19 refs., (Russian with English summary).

The skeleton of *Saurolophus angustirostris* (Hadrosauridae) found in 1948 at the foot of the Nemegt mountain, south Gobi, by the Mongolian Paleontological Expedition of the Akademiia Nauk SSSR is described and compared to *S. osborni* from the Edmonton Group of Alberta. A translated chart is included in the English summary which compares six characters of the two species.

385 ROZHDESTVENSKY, A.K. 1957. Dinosaurian localities of the Upper Cretaceous on Amur River. Vertebrata PalAsiatica, v. 1(4), p. 285-291, illus., 7 refs., (Russian with English and Chinese summaries).

USSR

386 ROZHDESTVENSKY, A.K., 1957. A short conclusion on the study of Mongolian fossil vertebrates. Vertebrata PalAsiatica, v. 1(3), p. 169-185, illus., 48 refs., (Russian with English and Chinese summaries).

The results of the Mongolian Paleontological Expedition of the Akademiia Nauk SSSR from 1946 to 1949 are summarized. Ten faunas ranging from the Lower Cretaceous to the Pliocene can be defined. The Upper Cretaceous fauna includes: 1) protoceratopsians and ankylosaurs including *Talarurus plicatospineus* gen. et sp. nov. (Ankylosauridae) and *Syrmosaurus viminicaudus*(= *Pinacosaurus grangeri*) gen. et sp. nov. (Syrmosauridae, fam. nov., now = Ankylosauridae) from Bayn Dzak and Bayn Shireh; and 2) the carnosaurs *Tyrannosaurus*(= *Tarbosaurus baatar*), *Tarbosaurus efremovi*(= *baatar*) and *Gorgosaurus lancinator*(= *Tarbosaurus baatar*, Tyrannosauridae), the hadrosaur *Saurolophus angustirostris*, (Hadrosauridae) and ornithomimids from Nemegt.

387 ROZHDESTVENSKY, A.K., 1958. *Auf Dinosauriejagd in der Gobi.* Leipzig: Brockhaus, 240 pp., illus.

German translation of the first edition of Rozhdestvensky (1969).

388 ROZHDESTVENSKY, A.K., 1960. *Chasse aux dinosaures dans le desert de Gobi.* Paris: Librarie Artheme Fayard, 303 pp.

French translation of the first edition of Rozhdestvensky (1969).

389 ROZHDESTVENSKY, A.K., 1960. Dinosaurier-funde in der Wuste Gobi. Umschau, no. 12, p. 357-359, no refs.

390 ROZHDESTVENSKY, A.K. 1961. Field investigations of the Soviet-Chinese Paleontological Expedition in 1960. Paleontologicheskii Zhurnal, no. 1, p. 170-174, illus., (Russian).

391 ROZHDESTVENSKY, A.K. 1961. In Central Asia (Brief results of the two-year investigations of the Soviet and Chinese palaeontologists). Vestnik Akademiia Nauk SSSR, v. 8, p. 85-90 (Russian).

This article is a summary of the fossil material collected in central and western Inner Mongolia (China) in 1959 and 1960 by the Soviet-Chinese Paleontological Expedition. In the area of Maortu (Alashan) two important Upper Cretaceous dinosaur localities were found, and sauropods, ankylosaurs and several dinosaurs of a new group linking iguanodonts and hadrosaurs were collected.

392 ROZHDESTVENSKY, A.K., 1964. New taxa on the occurrence of dinosaurs on the territory of Kazakhstan and Central Asia. Trudy Institutii Universitet Tashkent, v. 234, p. 227-240, (Russian).

USSR

393 ROZHDESTVENSKY, A.K., 1965. Variability due to age and certain problems of classification of dinosaurs of Asia. Paleontologicheskii Zhurnal, no. 3, p. 95-109, 26 refs., (Russian).

394 ROZHDESTVENSKY, A.K., 1966. New iguanodonts from Central Asia. International Geology Review, v. 9(4), p. 556-566, 16 refs.

Some new iguanodonts from the Maortu site in Alashan are assigned to *Probactrosaurus gobiensis* gen. et sp. nov. and *P. alashanicus* sp. nov. (Iguanodontidae). The sequence of *P. gobiensis*, *P. alashanicus* and *Bactrosaurus johnsoni* (Hadrosauridae) found in the oldest to youngest beds of the area may represent stages in a rapid transition from iguanodonts to hadrosaurs. The uppermost (*Bactrosaurus*) bed at Maortu is assigned to Cenomanian age, while the two lower (*Probactrosaurus*) beds are dated as Aptian-Albian in age.

395 ROZHDESTVENSKY, A.K., 1968. Find of a gigantic dinosaur. Priroda, no. 2,

p. 115-116, no refs.

USSR

396 ROZHDESTVENSKY, A.K. 1969. *In search of dinosaurs in the Gobi*, 3rd edition. Moscow: Nauka Press, 293 pp., illus., (Russian).

A non-technical account of the Soviet expeditions intoMongolia from 1946-1949.

397 ROZHDESTVENSKY, A.K., 1970. Giant claws of enigmatic Mesozoic reptiles. Paleontological Journal, v. 4(1), p. 117-125, illus., 12 refs.

The gigantic claw material of Cretaceous reptiles is analyzed from systematic, morphological, ecological and evolutionary perspectives. All the material is assigned to two families:

1) Therizinosauridae (*Alectrosaurus olseni*, now in Tyrannosauridae, and *Therizinosaurus cheloniformis*), and;

2) Deinocheiridae (*Deinocheirus mirificus*).

The former family probably had a mode of life similar to anteaters while the latter group resembled sloths. The evolution of entomophagous and phytophagous carnivorous dinosaurs was probably connected with the wide range of angiosperms and the emergence of various groups of social insects in the second half of the Mesozoic.

398 ROZHDESTVENSKY, A.K., 1970. Mesozoic and Cenozoic terrestrial vertebrate complexes of Central Asia and adjoining regions of Kazakhstan and their stratigraphic position. *In* Biostratigraficheskie i Paleobiofatsial'nye Issledoviia Iikh Praktic Eskoe z Nachenie, p. 50-58, (Russian).

Not seen

399 ROZHDESTVENSKY, A.K., 1971. The study of dinosaurs in Mongolia and their role in the subdivision of the continental Mesozoic. *In* The Joint Soviet-Mongolian Geological Expedition, Transactions, v. 3, p. 21-32, illus., 49 refs., (Russian).

400 ROZHDESTVENSKY, A.K., 1972. The development of dinosaurian faunas in Asia and on other continents and the paleogeography of the Mesozoic. Akademia Nauk SSSR, Izdatel'stvo, Seriia Geologicheskaiai, no. 12, p. 115-133, illus., 67 refs., (Russian with English summary).

This article is a comprehensive account of the general evolution of dinosaur faunas in Asia. The similarities between the dinosaur assemblages of Asia and North America during the Upper Cretaceous are used as evidence for a number of important dinosaur migrations between the two continents. For example, the later appearance of *Saurolophus* (Hadrosauridae) in Mongolia than in Alberta is interpreted as a migration of hadrosaurs to Asia from North America. Conversely, it appears that the Ceratopsidae of North America had their origin in the Protoceratopsidae of Asia. These interpretations are summarized in the article by several detailed tables and maps.

The development of dinosaur faunas within Asia from the Jurassic to the Upper Cretaceous is also discussed in some depth. The author concludes that a gradual extinction occurred and there is no need for a special explanation for the disappearance of the dinosaurs.

401 ROZHDESTVENSKY, A.K., 1974. A history of the dinosaur fauna from Asia and other continents and some problems of paleogeography. *In* Mesozoic and Cenozoic Faunas and Biostratigraphy of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 1, p. 107-131, 157 refs., (Russian with English summary).

The Late Triassic, Late Jurassic, Early Cretaceous and the Late Cretaceous are marked by distinct faunal complexes. These are known mostly from an area of land exposed to physical changes followed by regressions and transgressions of a bordering sea. These great changes in the environment led to the extinction of specialized fauna such as the dinosaurs. These extinctions were occurring throughout the Mesozoic.

(Annotation from English summary by journal)

402 ROZHDESTVENSKY, A.K., 1974. *In Search of Dinosaurs of the Gobi.* Tokyo: Tsukiji Shokan Co., 235 pp.,(Japanese).

Japanese translation of the Russia edition.

403 ROZHDESTVENSKY, A.K., 1974. Study of Mesozoic reptiles in Russia and its future prospects. Paleontological Journal, v. 8(2), p. 147, no refs.

This article is a translated summary of the author's article "Izucheniye mezozoyskikh reptiliy v Rossi i dal'neyshiye perspektivy" from Paleontologicheskii Zhurnal, no. 2, p. 26-32. It is a brief review of the history of Russia research on Mesozoic reptiles and lists the major discoveries made by Russia expeditions.

404 ROZHDESTVENSKY, A.K., 1977. The study of dinosaurs in Asia. *In* Jurij Alexandrovich Orlov Memorial Volume (Singh, S.N., et al., editors), Palaeontological Society of India, Journal, v. 20, p. 102-119, illus., 206 refs.

This review article gives a complete, concise summary of the history of all work done on dinosaurs in Asia (including India, Russia, China and Mongolia). Beginning with R. Lydekker (1877), all important finds, localities, expeditions and scientists are discussed. A table is included listing all known dinosaur species from Asia, their age, distribution and the validity of their names.

405 ROZHDESTVENSKY, A.K., 1978. Nadotryad Dinosauria. Mlekopitayu shchie. *In* Razvitie i Smena Organicheskogo Mira na Rubezhe Mezozoya i Kainoya (Shimanskii, V.N. and A.N. Solov'ev, editors). Razvitie Akademia Nauk SSSR, Izdatel'stvo "Nauka," p. 57-82.

Not seen

406 ROZHDESTVENSKY, A.K. and CHOW, M., 1960. On the work of the Soviet-Chinese Paleontological Expedition. Paleontologicheskii Zhurnal, no. 1, p. 142-147, illus., (Russian).

Not seen

407 ROZHDESTVENSKY, A.K. and TATARINOV, L.P., 1964. Amphibians, reptiles and birds. *In* Fundamentals of Paleontology (Orlov, J.A., editor), v. 12, Moscow: Nauka, 722 pp., (Russian).

An encyclopedia of fossil amphibians, reptiles and birds from the USSR, Mongolia and parts of China.

408 RUSSELL, DALE A., 1970. The dinosaurs of Central Asia. Canadian Geographical Journal, v. 81(6), p. 208-215, no refs.

A non-technical account of the dinosaurian fauna of Asia.

409 RYABININ, A.N.: see RIABININ, A.N.

410 SADOV, I.A., 1959. Structural resemblance of the eggshell between birds and fossil reptiles. Abstracts, 2nd All-Union Ornithological Conference, no. 1, Izd-vo Moscow State University, p. 22-23

Not seen

411 SADOV, I.A., 1970. Eggshell structure in fossil reptiles and birds. Paleontological Journal, v. 4(4), Dec., p. 535-538, illus., 4 refs.

This article, published posthumously, was written in the mid-1950's and reflects the state of knowledge at that time.

After studying the microstructure of a large number of recent bird and reptile eggs, and comparing these results with that obtained from examining the microstructure of dinosaur eggs from the Upper Cretaceous of Mongolia and China, the author concludes that eggshell microstructure can be used for systematic purposes.

The author suggests that the original reptilian eggshell was sphero-crystalline in nature, as is still seen in turtle eggs. From this form, acicular and columnar structures developed in different Cretaceous reptiles. Acicular eggshell is no longer seen, but modern bird eggshell developed from the columnar form.

412 SAITO ,K., 1936. Mesozoic leptolepid fishes from Jehol and Chien tao, Manchuria. Report of the 1st Scientific Expedition to Manchuria, section 2, part 3, p. 1-15, 15 refs.

Upper Jurassic - Lower Cretaceous. *Manchurichthys uwatokoi* sp. nov. (Leptolepidae).

413 SAVAGE, D.E., and RUSSELL, D.E., 1983. Mesozoic mammalian faunas; Mammals about 200 to 65 million years ago. *In* Mammalian Paleofaunas of the World (Savage, D.E. and Russell, D.E.), Reading, Mass.: Addison-Wesley Publishing Company, p. 11-17, 19 refs.

A brief outline of the Mesozoic mammals is presented. A list is included of the world's Mesozoic mammal-bearing lithostratigraphic units and Mesozoic mammal localities.

414 SCHUYF, P., 1969. De kop van *Triceratops* cf. *brevicornis* HATCHER in het Mineralogisch-Geologisch Museum van de Technische Hogeschool te Delft. Groondboor en Hamer, no. 2 (March), p. 67-73, illus., 6 refs., (Dutch with English abstract).

This article contains a few remarks concerning the skull and eggs of *Protoceratops andrewsi* which are held in the Museum.

415 SCHWARZ, LEOPOLD, FEHSE, F., MULLER, G., ANDERSON, F. and SIECK, F., 1961. Untersuchungen an Dinosaurier-Eischalen von Aix-en Provence und der der Mongolei (Shabarakh Usu). Zeitschrift fur Wissenschaftliche Zoologie, v. 165, p. 344-379, illus., 27 refs., (German with English and French summaries).

Dinosaur eggshell from Aix-en-Provence, France and Shabarakh Usu (Bayn Dzak), Mongolia were examined. Papilles, basalealottes and the diameter of the shells were measured. It was found that the "craters of resorption" in the shells proved the development of dinosaur embryos.

A chemical analysis revealed a high ash content.

416 SCHWARZ, L., FEHSE, F. and VALETIN, I., 1962. Untersuchungen an Dinosaurier-Eischalen II (Iren Dabasu, Mongolei). Zeitschrift fur Wissenschaftliche Zoologie, v. 167, p. 122-136 , illus., 10 refs., (German with French and English summaries).

Ten pieces of dinosaur eggshell from Iren Dabasu (now in China) were examined and compared to pieces from Aix-en-Provence, France and Shabarakh Usu (Bayn Dzak), Mongolia. The pieces from Iren Dabasu have a smooth surface interrupted by easily spotted holes. Other surface features are also reported. The ash and mineral content of the shell fragments are given. Color was determined by comparison to Ostwald's Color Scale. Fluorescence was also measured.

417 SEYMOUR, ROGER S., 1980. Dinosaur eggs: the relationships between gas conductance through the shell, water loss during incubation and clutch size. *In* Ecosystemes Continenteaux du Mesozoique (Taquet, Phillippe, editor). Memoires de la Societe Geologique de France, Memoire no. 139, p. 177-184, illus., 70 refs., (English with French summary).

Measurements of shell and pore geometry of Upper Cretaceous fossil dinosaur eggs enabled the author to estimate the conductance of water vapour and respiratory gases by diffusion through the eggshell. By comparing these rates with those of extant reptiles and birds, it appears that the highly porous shells of the three dinosaur species studied were laid in nests high in humidity, low in oxygen and high in carbon dioxide. Eggs attributed to two Mongolian dinosaurs from the Gobi Desert, *Protoceratops andrewsi* (Protoceratopsidae) and a large unspecified sauropod, were used in this study.

418 SHIKAMA, TOKIO, 1941. Fossil vertebrates from China. Contrib. Inst. Geol. Pal., Tohoku Imp. Univ., no. 36, 103 pp., illus., (Japanese).

Not seen

419 SHIKAMA, T., 1942. Vertebrate fossils from East Asia. Journal of Geography Tokyo, v. 54(638), p. 144-163, no refs., (Japanese with English summary).

420 SHUVALOV, V.F., 1974. Concerning the geological structure and the age of the find-localities of Khobur and Khuren-Dukh. *In* Mesozoic and Cenozoic Faunas and Biostratigraphy of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 1, p. 296-304, 368 , illus., (Russian with English summary).

421 SHUVALOV, V.F., 1975. Buyliasutuin-Khuduk. New location of Early Cretaceous dinosaurs. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 2, p. 210-213, (Russian with English summary).

Lower Cretaceous

422 SHUVALOV, V.F., 1980. Jurassic and Lower Cretaceous lake deposits of the eastern Gobi Desert and the distribution of fossil flora and fauna. *In* The Limnobiology of Some Ancient Lake Basins of Eurasia (Martinson, G.G., editor). Leningrad: Izd. Nauka, p. 91-124, 19 refs., (Russian).

Lower Cretaceous

423 SHUVALOV, V.F. and CHKHIKVADZE, V.M., 1974. Bambu Khudu, a new large find-locality of Upper Cretaceous turtles in southwestern Mongolia. Akademia Nauk Gruzinskoi, SSSR, Soobshcheniia, v. 76(2), p. 481-484, illus., 3 refs., (Russian with Georgian and English summaries).

This article describes a large number of fossil turtles (*Mongolemys elegans* (Dermatemydidae), *Trionyx* sp. (Trionychidae)) collected from Upper Cretaceous (Maastrichtian) rocks near Bugeen Tsav (Bugin Tsav) of the central part of the Transaltaic Gobi. The turtles are suspected to have died from a drastic climatic change during summer or winter hibernation.

424 SHUVALOV, V.F. and CHKHIHVADZE, V.M., 1975. New data on Late Cretaceous turtles from South Mongolia. *In* Fossil Fauna and Flora of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 2, p. 214-229, illus., 20 refs.

This article discusses the composition and stratigraphical position of Late Cretaceous turtles from from the following localities in Mongolia: Bayshin Tsav, Khar Khutul, Dersny Huduk, Khermeen Tsav, Sheeregeen Gashun, Gurilen Tsav and Khuren Tsav.

The turtles form three complexes which replace each other with time. These are:

1) Lower part of the Baynshire Formation (Upper Senonian-Turonian): ?*Zangerlia* sp. (Dermatemydidae), ?*Adocus* sp. (Dermatemydidae), *Hoplochelys* sp. (Dermatemydidae, incerta sedis), Adocidae gen. et sp. indet. (Dermatemydidae) and ? *Trionyx* sp (Trionychidae).

2) Lower part of the Barun Goyot Formation and the upper part of the Baynshire Formation (Turonian-Santonian): *Lindholmenys martinsoni* sp. nov. (Dermatemydidae), ?*Zangerlia* sp. (Dermatemydidae), *Trionyx* sp. (Trionychidae)

3) Nemegt Suite (Maastrichtian): " *Neurankylus*" sp. (Neurankylidae), *Mongolemys elegans* (Dermatemydidae), ? *Zangerlia* sp. (Dermatemydidae) and *Trionyx* sp. (Trionychidae)

New species of Upper Cretaceous turtles from Sheeregeen Gashoon are described.

425 SHUVALOV, V.F. and CHKHIKVADZE, V.M., 1979. The stratigraphic and systematic position of some fresh-water turtles from new Cretaceous localities of Mongolia. *In* Mesozoic and Cenozoic Faunas of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 8, p. 58-76.

This article gives descriptions of new localities of Lower Cretaceous turtles from the Transaltaic Gobi and south Hangai and Upper Cretaceous turtles from eastern and Transaltaic Gobi.

Anosteira shuwalovi sp. nov. (Carettochelyidae) and *Lindholmemys martinsonsi* sp. nov. (Dermatemydidae, incerta sedis) from the Upper Cretaceous of the eastern Gobi are described. *Hangaiemys kansuensis* (?Macrobaenidae[Fam. undesig.]) from the Transaltic Gobi is also described.

(Annotation from English summary by journal)

426 SIGOGNEAU-RUSSELL, DENISE, 1981. Presence d'un nouveau champsosauride dans le Cretace superieur de Chine. Comptes Rendus de Seances du l'Academie de Science, Series III, Science de la Vie, v. 292(1), January, p. 1-4, illus., 5 refs., (French with English summary).

The type specimen of the crocodile *Eotomistoma multidentata* (Crocodylidae) is re-examined and it is determined that most of it actually represents a new species of champsosaurid, *Ikechosaurus sunailinae* (Champsosauridae), from Ikechaomeng, Otok district, Inner Mongolia.

427 SIGOGNEAU-RUSSEL, D. and EFIMOV, M., 1984. Un Choristodera (Eosuchia?) insolite du Cretace Inferieur de Mongolie. Palaeontologische Zeitschrift, v. 58(3-4), p. 279-294, illus., 23 refs., (French with German, English and Russian summaries).

Lower Cretaceous

428 SIMPSON, GEORGE GAYLORD, 1925. A Mesozoic mammal skull from Mongolia. American Museum Novitates, no. 201, 11 pp., no refs.

This article is the first description of *Djadochtatherium*(=*Catopsalis matthewi* gen. et sp. nov. (Taeniolabididae)) from the early Upper Cretaceous Djadokhta Formation at Shabarakh Usu (=Bayn Dzak).

Mongolia.

429 SIMPSON, G.G., 1926. Mesozoic mammalia, part IV. The multituberculates as living animals. American Journal of Science, ser. 5, v. 2, p. 228-250, 14 refs.

The discovery of *Djadochtatherium*(=*Catopsalis*) (Taeniolabididae) is briefly mentioned.

430 SIMPSON, G.G., 1928. A catalogue of Mesozoic mammalia in the Geological Department of the British Museum. London: William Clowes and Sons, Ltd., 21p.

Djadochtatherium(=*Catopsalis*) (Taeniolabididae) is mentioned.

431 SIMPSON, G.G., 1928. Further notes on Mongolian Cretaceous mammals. American Museum Novitates, no. 329, 9 pp., no refs.

Zalambdalestes grangeri(=*lechi*) sp. nov. (Zalambdalestidae) from the Upper Cretaceous Djadokhta Formation at Shabarakh Usu (=Bayn Dzak), Mongolia, is described based on a partial pelvis and femur. In addition, new information is presented from the completely exposed type skull of *Djadochtatherium*(=*Catopsalis matthewi*) (Taeniolabididae).

432 SIMPSON, G.G., 1928. Affinities of the Mongolian Cretaceous insectivores. American Museum Novitates, no. 330, p. 1-11, no refs.

The Mongolian Cretaceous insectivores are placed in two families of four genera and five species:
Deltatheridiidae
    Deltatheridium pretuberculare
    Deltatheroides cretacicus
    Hyotheridium dobsoni
Zalambdalestidae
    Zalambdalestes lechei
    Zalambdalestes grangeri(=*lechi*)
The two families are discussed.

433 SIMPSON, G.G., 1937. Article VIII - Skull structure of the Multituberculata. Bulletin of the American Museum of Natural History, v. 73(8), p. 727-763, 22 refs.

The skull of *Djadochtatherium*(=*Catopsalis*) (Taeniolabididae) from the Upper Cretaceous Djadokhta Formation at Shabarakh Usu (=Bayn Dzak), Mongolia, is briefly discussed.

434 SIMPSON, G.G., 1961. Evolution of Mesozoic mammals. *In* International Colloquium on the Evolution of Lower and Non-specialized Mammals (Vandebroek, G., editor). Brussels: Kon. Vlaamse Acad. Wetensch. Lett. Schone Kunsten Belgie, part 1, p. 57-58.

435 SIMPSON, G.G., 1971. Concluding remarks: Mesozoic mammals revisited. *In* Early Mammals (Kermack, D.M. and Kermack, K.A., editors). Zoological Journal of the Linnaean Society, v. 50, suppl. 1, p. 181-198.

Cretaceous mammals from Asia are briefly discussed.

436 SOCHAVA, ANDREI, V., 1969. Dinosaur eggs from the Upper Cretaceous of the Gobi Desert. Paleontological Journal, v. 3(4), p. 517-527, illus., 17 refs.

The author distinguishes three types of Late Cretaceous dinosaur egg shells based on the shape and arrangement of the aeration canals. These types are angusticanalicular, prolatocanalicular and multicanalicular. Based on inferential evidence it is suggested that the angusticanalicular shell belonged to hadrosaurs (not *Protoceratops*, Protoceratopsidae) as suggested by Brown and Schlaikjer, 1940) and the multicanalicular shell type belonged to sauropods. It is also suggested that the abundence of dinosaur egg clutches with calcareous shells in the Upper Cretaceous deposits is connected with a certain aridization of the climate in the Upper Cretaceous.

A sketch map is included indicating the locations of dinosaur egg deposits in the northern Gobi Desert.

437 SOCHAVA, A.V., 1970. Microstructure of dinosaur egg shells from the Lower Cretaceous of northern Gobi. Akademia Nauk SSSR, Doklady, (Earth Sciences Sections), v. 192(5), p. 1137-1140, illus., 10 refs.

A large number of Upper and Lower Cretaceous (note error in title) dinosaur eggs from the northern Gobi were studied in radial and tangential sections. This allowed these eggs to be classified according to their microtexture, and the categories included: elongate and oval eggs with double-layered shells and few channels, double-layered shells with many channels, and single-layered shells without modern bird or reptile counterparts. The first type of eggshell is known from the Senonian of Bayn Dzak (Shabarak Usu) as well as Haichin Ula and Tsagan Khushu, Transaltaic Gobi. The second type was found in Cenomanian and Turonian sediments at Sheeregeen Gashoon (northern Gobi), as well as Iren Dabasu and the Tel Ulan Shalcha Hills. Albian and Cenomanian sediments of the Algoy Ulan Tsav Hills (northern Gobi) produced the third kind.

438 SOCHAVA, A.V., 1970. Dinosaur eggs in the Gobi Desert. Priroda, no. 10, p. 65-68, illus., no refs., (Russian).

This article is a fairly detailed discussion of the microstructure of Upper Cretaceous fossil eggs from Bayn Dzak and Algoy Ulan Tsav (Mongolia). Comparisons are made between these eggs and those of modern turtles, crocodiles and birds in order to determine whether the fossil eggs are actually dinosaur eggs. Some characteristics of the burial and hatching of these eggs are also examined. Several detailed diagrams of the fossil egg microstructure are included.

439 SOCHAVA, A.V., 1971. New data on the dinosaur egg shell structure. Priroda, no. 18, p. 103-104, illus., 1 ref., (Russian).

In this article the author notes that of the 20 types of Cretaceous dinosaur eggshells known worldwide, nearly half have been found in the Gobi Desert (Mongolia). These can be divided into two main types of shell: ornithoid (similar to bird eggshell) and testudinoid (similar to turtle eggshell). It appears ornithischian dinosaurs developed the former type, while saurischians possessed the latter.

Microscopic analysis by the author also revealed an undershell membrane, while chromatographical analysis identified 18 amino acids. The shell of dinosaur eggs appears to have been mostly keratinous.

440 SOCHAVA, A.V., 1971. Two types of eggshell in Senonian dinosaurs. Paleontological Journal, v. 5(3), p. 353-361, illus., 12 refs.

With the use of a polarizing microscopic, the author examined the microstructure of dinosaur eggshell from Senonian deposits of Mongolia, Kazakhstan and southern France. This method distinguished two types of fossil eggshell, ornithoid and testudinoid, which differed in the structure of shell layers and in the aeration canals. Judging from the association of eggs and dinosaurs and other evidence, the author concludes that ornithoid eggs are ornithischian and testudoid are saurischian in nature. Detailed photographs illustrate the various eggshell forms.

441 SOCHAVA, A.V., 1972. The skeleton of an embryo in a dinosaur egg. Paleontological Journal, v. 6(4), p. 527-531, illus., 8 refs.

Fragments of a dinosaur embryo were recovered from an egg collected from the Upper Cretaceous Dzhibkhalant Suite of the Tel Ulan Ula uplands of the eastern Gobi (Mongolia). The histology of the bone fragments is described and the degree of ossification and embryonic development is discussed. The bone fragments are interpreted as metatarsal elements, and from their morphology, the author suggests the embryo may have been a ceratopsian dinosaur.

442 SU DEZAO, 1980. On late Mesozoic fish fauna from Xinjiang, China. Vertebrata PalAsiatica, v. 18(1), Jan., p. 76-80.

443 SU DEZAO, 1980. Note on a new Cretaceous *Lepidotes* from Yunnan China. Vertebrata PalAsiatica, v. 18(4), Oct., p. 281-285, illus., 25 refs.

444 SUES, HANS-DIETER, 1977. The skull of *Velociraptor mongoliensis*, a small Cretaceous theropod dinosaur from Mongolia. Palaontologische Zeitschrift, v. 51(3-4), December, p. 173-184, illus., 25 refs., (English with German summary).

This article is the first detailed description of the skull of *Velociraptor mongoliensis* (Dromaeosauridae) from the Upper Cretaceous (?Campanian) Djadokhta Formation of Mongolia. It is distinguished from other dromaeosaurids by it relatively long, low skull and depressed muzzle.

The relationship of *Velociraptor* to other East Asian dromaeosaurids and their taxonomic status is discussed.

445 SUES, H.-D., 1982. Review of Lillegraven, J.A., Kielan-Jaworowska, Z., and Clemens, W.A. (editors), 1979: Mesozoic Mammals; The First Two-thirds of Mammalian History. (Berkeley: University of California Press, 311 p.). Zentralblatt fur Geologie und Palaontologie v. 2, p. 228-229, (German).

Book review

446 SUKHANOV, V.B. and NARMANDAKH, P., 1974. Preliminary results of the study of extinct turtles of the MPR. Bulletin of the Moscow Department of the Institute of Paleontology, Department of Geology, no. 5, p. 145.

A variety of turtles from the Lower Cretaceous of Mongolia are briefly described. Upper Cretaceous forms mentioned include: *Basilemys orientalis* (Dermatemydidae) (Baynshire Formation), which is compared to *Zangerlia testudinimorpha* (?Dermatemydidae) (Barun Goyot Formation); *Mongolemys barsboldi* sp. n. (Dermatemydidae) (Barun Goyot Formation), compared to *M. elegans*; and several unidentified turtles from the Dermatemydidae and Bataguridae (Nemegt Formation).

447 SUKHANOV, V.B. and NARMANDAKH, P., 1974. New Early Cretaceous turtle from continental deposits of the Northern Gobi. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 1, p. 192-220, (Russian with English summary).

Lower Cretaceous

448 SUKHANOV, V.B. and NARMANDAKH, P., 1975. New turtles of the *Basilemys* group (Chelonia, Dermatemydidae) in Asia. *In* Fossil Fauna and Flora of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 2, p. 94-101, illus., 13 refs., (Russian with English summary).

The turtle *Basilemys orientalis* sp. nov. (Dermatemydidae) from the Upper Cretaceous Bayn Shireh location in the Mongolian Peoples' Republic is described. The comparison of *Zangerlia testudinimorpha* (Dermatemydidae) from the Barun Goyot locality in Mongolia with the North American *Basilemys* species does not show differentiation of a new genus at this time. Asian forms of *Basilemys* are discussed in comparison to North American forms.
(Annotation from English summary by journal)

449 SUKHANOV, V.B. and NARMANDAKH, P., 1977. The shell and limbs of *Basilemys orientalis* (Chelonia, Dermatemydidae). *In* Mesozoic and Cenozoic Faunas, Floras and Biostratigraphy of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 4, p. 57-80, 163-164, 169, illus., 18 refs., (Russian with English summary).

The nearly complete shell of *Basilemys orientalis* (Dermatemydidae) from the Upper Cretaceous beds of the Mongolian Peoples' Republic is described and compared to other species of the genus including *B. infamarginalis* and *B. wuchingensis*.
(Annotation from English summary by journal)

450 SUKHANOV, V.B. and NARMANDAKH, P., 1979. Preliminary results of the study of the extinct turtles of the Mongolian People's Republic. (abstract)Moskovskoe Obshchestvo Ispytatelei Prirody. Byuulleten Otdel Geologicheskii, p. 145, no refs., (Russian).

451 SUKHANOV, V.B. and NARMANDAKH, P., 1983. The new genus of the Late Cretaceous turtles of Mongolia. *In* Fossil Reptiles of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 24, p. 44-66, 10 refs.

A description of *Gravemys barsboldii* (Bataguridae) from the Upper Cretaceous of Narmandakh, southern Mongolia is presented.
(Annotation from English summary by journal)

452 SULIMSKI, ANDREZEJ, 1972. *Adamisaurus magnidentatus* gen. nov., sp. nov. (Sauria) from the Upper Cretaceous of Mongolia. *In* Results of the

Polish-Mongolian Palaeontological Expeditions, Part IV. Palaeontologia Polonica, no. 27, p. 33-40, illus., 20 refs.

The preliminary description of *Adamisaurus magnidentatus* gen. et sp. nov. (?Agamidae [=Teiidae), a Mongolian lizard from the Upper Cretaceous sandstone of the Djadokhta Formation (Bayn Dzak) and the Lower Nemegt Beds (Barun Goyot Formation) (Nemegt, Khulsan and Khermeen Tsav II) is presented.

453 SULIMSKI, A., 1975. Macrocephalosauridae and Polyglyphanodontidae (Sauria) from the Late Cretaceous of Mongolia. *In* Results of the Polish-Mongolian Palaeontological Expeditions, Part VI. Palaeontologia Polonica, no. 33, p. 25-102, illus., 65 refs.

The following large lizards from Mongolia are described: *Macrocephalosaurus ferrugenous* (Djadokhta Formation), *M. gilmorei* sp. nov., *M. chulsanensis* sp. nov. (Barun Goyot Formation), *Darchansaurus este* gen. et sp. nov. (Khermeen Tsav "Formation") all of the Macrocephalosauridae(=Teiidae), and *Erdenetesaurus robinsonae* gen. et sp. nov., *Cherminsaurus kozlowskii* gen. et sp. nov. (Khermeen Tsav Formation), of the Polyglyphanodontidae(=Teiidae). A review of their classification and a comparison to North American representatives is included.

454 SULIMSKI, A., 1975. New data on the genus *Adamisaurus* Sulimski 1972 (Sauria) from the Upper Cretaceous of Mongolia. *In* Results of the Polish-Mongolian Palaeontogical Expeditions, Part VIII. Palaeontologia Polonica, no. 38, p. 43-56, illus., 17 refs.

Recent, more complete material of *Adamisaurus magnidentatus* has prompted the author to redefine this species. Based on the structure of the skull and the form of tooth implantation and replacement, *Adamisaurus* is removed from the Agamidae and reassigned to the new monotypic family Adamisauridae(=Teiidae). *A. magnidentatus* is known from three Upper Cretaceous Mongolian localities: Bayn Dzak (Djadokhta Formation, ?Upper Santonian and/or ?Lower Campanian), Khulsan (Barun Goyot Formation, ?Middle Campanian) and Khermeen Tsav II (Red Beds of Khermeen Tsav, ?Middle Campanian).

455 SUN AILING, 1958. A new species of *Paralligator* from Sungarian plain. Vertebrata PalAsiatica, v. 2(4), p. 277-280.

The new Upper Cretaceous mesosuchian *Paralligator sungaricus* (Paralligatoridae) from China, discovered at Te-hui Hsien, Jilin(?) Province is described.

456 SUSLOV, JU.V., 1983. The locality of *Psittacosaurus* in Chamrin-us (East Gobi, MPR). *In* Fossil Repiles of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 24, p. 118-120, 10 refs., (Russian).

This article discusses some aspects of the taphonomy of *Psittacosaurus* (Psittacosauridae) from Khamarin-Us.
(Annotation from English summary by journal)

457 SWINTON, WILLIAM ELGIN and PARKER, NEAVE, 1956. Recontructing the past from fossils: some of the animals which have emerged from the expert study in the last few years of the Mesozoic deposits in China. Illustrated London News, v. 228, p. 210-211, illus., no refs.

A painting by Neave Parker in cooperation with Dr. W.E. Swinton is reproduced. It illustrates an assemblage of higher vertebrates from the Lower and Upper Cretaceous of the Provinces of Sichuan and Gansu in China. Not all of the depicted animals are named. The painting includes a spiny armoured dinosaur similar to *Kentrurosaurus* (sic) (Stegosauridae), *Omeisaurus* (Euhelopodidae), *Szechuanosaurus* (Megalosauridae) a bipedal herbivorous dinosaur similar to *Camptosaurus* (Iguanodontidae), pholidosaurs, hadrosaurs, a nodosaur and a small theropod.

458 SWINTON, W. and PARKER, N., 1957. A dinosaur's nursery of 130,000,000 years ago: stages in the hatchery process [and] the arrangement of the eggs reconstructed from discoveries made in Mongolia, the Gobi Desert. Illustrated London News, v. 231, p. 661, illus., no refs.

A painting by Neave Parker in cooperation with Dr. W.E. Swinton is reproduced. It depicts a scene of young *Protoceratops* (Protoceratopsidae) hatching from nests of eggs in the Gobi Desert, Mongolia.

459 SWINTON, W.E., and PARKER, N., 1960. Things to remember in natural history - #3: The age of the dinosaur - enormous monsters who once roamed the Gobi Desert. Illustrated London News, v. 236, p. 68-69, illus., no

A painting by Neave Parker in cooperation with Dr. W.E. Swinton is reproduced. It is a composite scene from the Upper Cretaceous of Mongolia based on field work carried out by Soviet palaeontologists in the Gobi Desert. The dinosaurs illustrated are: *Tyrannosaurus* (Tyrannosauridae), *Protiguanodon(=Psittacosaurus)* (Psittacosauridae), *Psittacosaurus* (Psittacosauridae), *Protoceratops* (Protoceratopsidae), *Styracosaurus* (Ceratopsidae) and *Saurolophus* (Hadrosauridae).

460 TAKAI, FUYUJI, 1941. The mammalia fossils of China. Journal of Geography, Tokyo, v. 53, p. 295-309, (Japanese).

461 TAKAI, F., 1941. Two new occurrences of the Mesozoic Leptolelid fishes in Heilongjiang. Journal of the Geological Society of Tokyo, v. 48, p. 362, no refs., (Japanese).

462 TAKAI, F., 1942. An occurrence of *Leptolepis* in the Cretaceous Sungari Series in Heilongjiang. Journal of the Faculty of Science, Tokyo Imperial University, Section II, v. 6, part 8, p. 129-133, illus., 17 refs.

A new species of fish, *Leptolepis longicephalus* sp. nov. (Leptolepidae) is described. This specimen was collected from the Upper Cretaceous Nenjiang Formation of the Sungari Series at Nung-an-hsien, Jilin Province. A short discussion of the relationships of *L. longicephalus* to other Asian genera is included.

463 TAKAI, F., 1944. A monograph of the lycopterid fishes from the Mesozoic of Eastern Asia. Journal of the Faculty of Science, Tokyo Imperial University, Section II, v. 6, p. 210-270, illus., 92 refs.

This article begins by reviewing the stratigraphy of Asian localities of Mesozoic lycopterid fish. Members of the genera *Lycoptera*, *Asiatolepis(=Lycoptera)*, *Manchurichthys*, and *Sungarichthys* (Lycopteridae) are then described and related to the Asian sequences. In this paper the dating of the various localities is very inaccurate and the placement of Upper Cretaceous lycopterids is poorly defined.

464 TATARINOV, L.P., 1979. The significance of paleontological studies in Mongolia. *In* Yubileynaya Knoferentsiya; Geologia i Magmatizm Mongolii. The Joint Soviet-Mongolian Geological Expedition, Transactions, v. 30, p. 18-24, 34 refs.

Not seen

465 THELWALL, D., 1971. Reptilia. Zoological Record, v. 106 (1969), section 17, 112 pp.

Not seen

466 THONE, FRANK, 1934. Dinosaur eggs. Science News Letter, v. 26, p. 13, illus., no refs.

This very brief non-scientific account discusses the discovery of

Mongolian dinosaur eggs by the Central Asiatic Expeditions.

467 TOKUNOGA, S. and NAORA, N., 1939. Fossil remains excavated at Ku-Hsiang-Tung near Harbin, Manchoukuo. Report of the Scientific Expedition to Manchoukuo, section 2(4), 230 pp., illus., (Japanese with English summary).

Not seen

468 TONG YONGSHENG and WANG JINGWEN, 1980. Subdivision of the Upper Cretaceous-Lower Tertiary of the Tantou, the Lushi, and the Lingbao Basins in the Henan Province. Vertebrata PalAsiatica, v. 18 (1), Jan., p. 21-27, 15 refs.

The sediments of the Tantou, Lushi, and Lingbao Basins are subdivided on the basis of the vertebrate fossils they contain. The Upper Cretaceous Quiba Formation in the Tantou Basin produced some *Tyrannosaurus luanchuanesis* (Tyrannosauridae) material. The Upper Cretaceous Nanchao Formation of the Lingbao Basin yielded dinosaur eggshell fragments. The biostratigraphy of these formations and several Tertiary formations are discussed in some detail.

469 TROFIMOV, B.A., 1975. New data on *Buginbaatar* (Mammalia, Multituberculata) from Mongolia. *In* Fossil Fauna and Flora of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 2, p. 7-13, 348, 21 refs., (Russian with English summary).

The remains of *Buginbaatar transalatensis* from Khaichin Ula 1, Mongolian People's Republic are described. It is suggested that the age of the site (Dzoon Mod) is Paleocene.

470 TROFIMOV, B.A., 1978. First triconodonts (Mammalia, Triconodonta) from Mongolia. Akademia Nauk SSSR, Doklady, v. 243(1-6), p. 219-222, illus.

Two new amphilestids from the Lower Cretaceous Khoboor locality (?Aptian or ?Albian), Mongolian Peoples' Republic are described and illustrated. These are *Gobiconodon borissiaki* gen. et sp. nov. and *Guchinodon hoburensis* gen. et sp. nov. (Amphilestidae).

471 TROFIMOV, B.A., 1980. Multituberculata and Symmetrodonta from the Lower Cretaceous deposits in Mongolia. Akademia Nauk USSR, Doklady, Earth Sciences Section, v. 251, p. 188-191, illus., 15 refs.

Lower Cretaceous

472 TROFIMOV, B.A. and CHUDINOV, P.K., 1970. New data on Mongolian vertebrate localities. *In* Materialy po Evoliutsii Nazemnykh Pozv Onochnykh, p. 152-160, (Russian).

Not seen

473 TSAREGRADSKY, V.A., 1935. Description detaillee du mosasaure *Dollosaurus lutugini*. Jak. Ann. Soc. Pal. Russie, v. 10, p. 49-54, (Russian with French summary).

USSR

474 TSYBIN, YU.I. and KURZANOV, S.M., 1979. New data on the Upper Cretaceous localities with vertebrates in the Baishin-Tsav region. *In* Mesozoic and Cenozoic Faunas of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 8, p. 108-112, 124, 150, illus., 3 refs., (Russian with English summary).

This article gives a geological description of the Bayshin Tsav (Baishin-Tsav) and Amtgay localities as well as indicating new finds of dinosaurs from the Nemegt Suite.
(Annotation from English summary by journal)

475 TU HENGCHIEN, 1947. New finds of fossil vertebrates in Shaanxi, Gansu, and Tsinshi provinces. Ti Chih Lun Ping, v. 12, p. 597-602, no refs., (Chinese).

476 TUMANOVA, T.A., 1977. New data on the ankylosaur *Tarchia gigantea*. Paleontological Journal, v. 11(4), p. 480-486, illus., 10 refs.

A partial skeleton of the ankylosaur *Tarchia gigantea* (Ankylosauridae) was collected in 1973 from the Upper Cretaceous Nemegt Formation at Khermeen Tsav, Mongolia. This material is described and then used to update the diagnosis of the recently created genus *Tarchia*, which was described by Maryanska in 1977. This new *Tarchia* material is distinguished in the article from North American ankylosaurs, including the genus *Dyoplosaurus*(=*Euoplocephalus*) (Ankylosauridae).

477 TUMANOVA, T.A., 1983. The first ankylosaurs from the Lower Cretaceous of Mongolia. *In* Fossil Reptiles of Mongolia. The Joint Soviet-Mongolian Paleontological Expedition, Transactions, v. 24, p. 110-118, illus., 3 refs., (Russian with English summary).

Lower Cretaceous

478 VAN STRAELEN, VICTOR, 1925. The microstructure of the dinosaurian egg shells from the Cretaceous beds of Mongolia. American Museum Novitates, no. 173, 4 pp.

A preliminary description is given of the microstructure of the eggs of the following two dinosaurs: (?)*Protoceratops andrewsi* (Protoceratopsidae) from the Djadokhta Formation of Shabarakh Usu (Bayn Dzak), Mongolia; and a probable hadrosaur from the Upper Cretaceous Iren Dabasu Formation at Iren Dabasu in Mongolia.

The rugose nature of the ***Protoceratops*** eggs along with the low number of very small pores suggests that during the formation of the Djadokhta beds Mongolia had a desert environment.

479 VAN VALEN, LEIGH, 1966. Deltatheridia, a new order of mammals. Bulletin of the American Museum of Natural History, v. 132, p. 1-126, 255 refs.

The skulls and dentition of *Deltatheridium* and *Deltatheroides* (Deltatheridiidae), both from Shabarakh Usu (Bayn Dzak), are discussed. The actual formation from which these fossils came (Djadokhta or Gashato) and their age (Upper Cretaceous or Early Paleocene) is also discussed.

480 VAN VALEN, L., 1974. *Deltatheridium* and marsupials. Nature, v. 248, p. 165-166, 10 refs.

The author presents evidence for his assertion that *Deltatheridium* (Deltatheridiidae) should be placed with the marsupials.

481 VERZILIN, N.N., 1975. Application of the features of the distribution of organic remains in the Cretaceous sediments of the Fergana for the purpose of paleoclimatic reconstructions and the clarification of the conditions of sedimentation. Izvestiia Vysshiki Uchebnykii Zavedenii Geologiia i Razvedka, no. 8, p. 30-38, illus., 21 refs., (Russian).

USSR

482 VERZILIN, N.N., 1979. The Cretaceous deposits of Khar Khutul and the problem of the Sain Shandsk Series. (abstract). Moskovskoye Obshchestvo Ispytateley Prirody, Byulleten', Otdel Geologicheskiy, v. 54(5), October, p. 123, no refs., (Russian).

This abstract is a geological re-interpretation of the deposits at Khar Khutul based on the fossils they contain. The presence of iguanodonts and *Psittacosaurus* (Psittacosauridae) suggests these deposits are Lower Cretaceous, and no longer can be considered as part of the Upper Cretaceous Sain Shandsk Series.

483 VERZILIN, N.N., GALIBIN, V.A., NESOV, L.A. and KHOZATSKY, L.I., 1975. Minor elements in fossilized shells of Mesozoic-Cenozoic turtles. Academiia Nauk SSSR, Doklady, Earth Sciences Section, v. 224(1-6), October, p. 189-191, illus., 7 refs.

USSR

484 VERZILIN, N.N., PRUDNIKOV, J.D. and J.S. SHAPKINA, 1985. Some geochemical properties of dinosaur egg shells from the Upper Cretaceous deposits of Gobi. Vestnik Leningradskogo Universiteta, Geologiya-Geografiya, 14(2), p. 3-8, illus., 8 refs., (Russian with English summary)

Not seen

485 WANG CHENGSHENG, 1976. Cretaceous dinosaur fossils are discovered for the first time in Sichuan Province. Vertebrata PalAsiatica, v. 14(2), April, top inside back cover, no refs., (Chinese).

This is a brief report of abundant fossils, including Dinocephalia(?), hadrosaur, and carnosaur dinosaurs, discovered in red sandstone of Qianjiang County, Sichuan Province. The age of the fossils appears to be the early part of the Upper Cretaceous.

486 WANG CHUNYI and ZHEN SHOUNAN, 1963. Observations of the mode of occurrence of fossil reptilian eggs from Shandong and Guangdong. Vertebrata PalAsiatica, v. 7(4), p. 317-368, 3 refs., (Chinese).

The authors observed fossil reptile eggs from Laiyang (Shandong) and Nanxiong (Guangdong) and noted the elliptical eggs were arranged radially, and suggest the eggs were laid in this fashion on a pile of soil before being covered. At times, another clutch of eggs were laid on top of the first eggs. No age is given for these fossil eggs.

487 WANG SHANCAI, 1976. A further discovery of a batch of fossil dinosaur eggs in Yun County, Hubei Province. Vertebrata PalAsiatica, v. 14(3), July, p. 207, no refs., (Chinese).

This article is a brief description of several groups of dinosaur eggs discovered by workers on a commune. No age or formation is given.

488 WEISHAMPEL, DAVID B. and HORNER, JOHN R., 1986. The hadrosaurid dinosaurs from the Iren Dabasu fauna (People's Republic of China, Late Cretaceous). Journal of Vertebrate Paleontology, v. 6(1), p. 38-45.

The majority of the skull elements and, in particular, the facial skeleton of the hadrosaurid material collected from Iren Dabasu (now in the People's Republic of China) by the Central Asiatic Expeditions was examined, much of it for the first time. It is determined that a true lambeosaurine was present at Iren Dabasu and the taxon *Bactrosaurus johnsoni* (Hadrosauridae) Gilmore (1933) is redefined based on this material. The hadrosaurine skull elements previously attributed to *B. johnsoni* are now assigned to *Gilmoreosaurus mongoliensis* (Hadrosauridae).

489 WESTPHAL, FRANK, 1982. Review of Kemp, T.S.: Mammal-like Reptiles and the Origins of Mammals (London: Academic Press, 353 pp., 1982). Zentralblatt fur Geologie und Palaontologie, v. 2, p. 149 (German).

Book review

490 WHITE, T.E., 1973. Catalogue of the genera of dinosaurs. Annals of the Carnegie Museum, v. 44, article 9, p. 117-155, no refs.

Each entry in this catalogue includes the genus, author and year; family and sub-order to which the genus belonged; type species and the elements which comprise the type; horizon and locality of the type specimen; and catalogue number of the type species and the museum in which it is housed, if known.

Chinese and Mongolian dinosaurs are included in this catalogue.

491 WIMAN, CARL, 1929. Die Kreide-Dinosaurier aus Shantung. Palaeontologica Sinica, v. 6(1), Series C, p. 1-67, 38 refs., (German).

492 WIMAN, C., 1930. Fossile Schildkroeten aus China. Palaeontologica Sinica, v. 6(3), Series C, p. 1-56, illus.

493 WU SHAOZU, 1973. A fossil of *Yaxartosaurus* is discovered in the Xinjiang. Vertebrata PalAsiatica, v. 11(2), September, p. 217-218, illus., no refs., (Chinese).

This brief note describes some fragmentary remains of an Upper Cretaceous dinosaur collected from Fuyun County, Xinjiang. The material is tentatively assigned to *Yaxartosaurus*(=*Jaxartosaurus*) sp.

494 XIE JUNYI, 1980. Discovery of dinosaur fossils in Tongwei County, Gansu Province. Vertebrata PalAsiatica, v. 18(2), April, p. 178.

Excavation of a site in Tongwei produced abundant dinosaur fossils, including limbs of carnosaurs and hadrosaurs, and teeth of carnosaurs, hadrosaurs and titanosaurs. It is suggested that the fossil-bearing strata corresponds in age to the Upper Cretaceous Subashi (Turpan, Xinjiang) and Nemegt (Mongolia) Formations.

495 XU QINGI and HUANG CHUPRCIEN, 1984. Some problems in evolution and distribution of *Alligator*. Vertebrata PalAsiatica, v. 22(1), p. 44-55, (Chinese with English summary).

The author of this article notes that the two extant species of *Alligator* (Crocodylidae) exist in widely separate localities, the Mississippi and Yangtze Rivers. In order to explain their present distribution, *Alligator* evolution from the Cretaceous to the present is reviewed. Migrations between East Asia and North America prior to the Miocene are proposed. The close relationships between Asian and North American dinosaurs and mammals during the Cretaceous are used as support for the possibility of these land migrations.

496 YABE, HISAKATSU, INAI, Y. and SHIKAMA, T., 1940. Discovery of dinosaurian footprints from the Cretaceous (?) Yangshan, Chinchou. Preliminary note. Proc. Imp. Acad. Tokyo, v. 116, p. 560-563, illus.

Non-technical.

497 YABE, H., INAI, Y. and T. SHIKAMA, 1940. Dinosaurian footprints found near Yangshan, Chinchou, Manchoukuo. Journal of the Geological Society of Tokyo, v. 47, p. 169-170, illus., (Japanese with English summary).

This brief note discusses some Cretaceous footprints (referred to as *Jeholosauripus s-satoi*[sic]) recovered from a site near Yangshan.

498 YABE, H. and OZAKI, K., 1929. Fossil chelonian(?) eggs from South Manchuria. Proceedings of The Imperial Academy, Tokyo, v. 5(1), p. 42-45, no refs.

A variety of fossil eggs from several sites in northeastern China, including some from the Chantou Formation (?Lower Cretaceous) are described. Due to their spheroidal shape, the author suggests these may be turtle eggs.

499 YAN C-T. and YANG CHUNGJIAN, 1959. The paleontology of lower quadrupeds. Priroda, no. 48(10), p. 69-73, illus., no refs., (Russian).

This article describes a variety of reptiles and amphibians which are from the Jurassic and Cretaceous of China. ***Psittacosaurus*** (Psittacosauridae) from the Lower Cretaceous is briefly described and hadrosaurs from the Upper Cretaceous, including ***Tsintaosaurus*** and ***Bactrosaurus*** (Hadrosauridae), are mentioned. A new tyrannosaur, ***Chingkankousaurus fragilis*** (now in Megalosauridae) is also briefly described. Few details or ages are presented.

500 YAN XU, 1976. Abundant vertebrate fossils discovered from Cenozoic strata, Hubei Province. Vertebrata PalAsiatica, v. 14(1), inside back cover, (Chinese).

In addition to the Cenozoic material, some Upper Cretaceous dinosaur eggs and a dinosaur bone are mentioned.

501 YANG CHUNGJIAN, 1931. Concerning the Sino-French Scientific Commission of which I was a participant. Bull. Northwestern Studies, no. 2, p. 49-54, (Chinese).

502 YANG CHUNGJIAN, 1932. On some new dinosaurs from western Suiyan, Inner Mongolia. Bulletin of the Geological Society of China, no. 11, p. 259-266, illus.

Lower Cretaceous

503 YANG CHUNGJIAN, 1935. On a dorsal fin-spine of ***Hyobus*** from northwestern Gansu. Bulletin of the Geological Society of China, no. 14, p. 53-54, illus., 3 refs.

Lower Cretaceous

504 YANG CHUNGJIAN, 1935. Fossil reptiles in China. Memoirs of the Geological Survey of China (Series B), no. 8, p. 1-59, illus., 38 refs., (Chinese).

This paper is a general review of fossil reptiles known from China as of 1935. The classification as well as temporal and spacial distribution of reptiles from the Lower Cretaceous to the Tertiary are discussed and then summarized in several tables and maps. In addition, the history of fossil reptile discoveries is discussed and many of the fossils are described.
The Upper Cretaceous fauna discussed in this paper included the

following from Heilongjiang Province:

Mandschurosaurus amurensis (Hadrosauridae)
Saurolophus krichofovic (*=osborni*) (Hadrosauridae)
Albertosaurus periculosis(*=Tarbosaurus bataar*) (Tyrannosauridae)
Aspideretes(*=Trionyx*) *planicostatus* (Trionychidae)
Cupresinoxylon sp.

Tanius sinensis (Hadrosauridae) from the Upper Cretaceous Wangshih Series of Southeast Shandong Province is discussed, and the findings of the American Museum of Natural History expeditions are summarized.

The following Lower Cretaceous dinosaurs found in the deposits of the northern Ningxia Autonomous Region are also described:

Psittacosaurus osborni (Psittacosauridae)
Psittacosaurus tingi (*=osborni*) (Psittacosauridae)
Protiguanodon(=Psittacosaurus) mongoliense (Psittacosauridae)

505 YANG CHUNGJIAN, 1935. On the reptilian remains of the Tzuliuchine Formation (Tzekuei Series) near Chongqing, Sichuan. Bulletin of the Geological Society of China, no. 14, p. 67-72, illus., 4 refs.

A brief description of three Lower Cretaceous teeth, probably crocodilian in origin.

506 YANG CHUNGJIAN, 1935. Dinosaurian remains from Mengyin, Shandong. Bulletin of the Geological Society of China, no. 14, p. 519-533, illus.

Lower Cretaceous

507 YANG CHUNGJIAN, 1935. On a new nodosaurid from Ningxia. Palaeontologica Sinica, v. 11(1), Series C, p. 1-34, illus., 12 refs.

In this paper, an extensive and detailed description of the fragmentary remains of *Pinacosaurus ninghsiensis*(*=grangeri*) sp. nov. (Ankylosauridae) is presented. This specimen was collected in the winter of 1932 in the desert of northern Alashan, China. A brief comparison to *Pinacosaurus grangeri* from the Djadokhta Formation of Mongolia is made, and on this basis the author determined the geological age of the new specimen to be Upper Cretaceous.

508 YANG CHUNGJIAN, 1936. New researches on the mammal-like reptiles of Xinjiang. Proc. 7th Sess. Chinese Sci. Soc., (Chinese).

Not seen

509 YANG CHUNGJIAN, 1936. Vertebrate fossils from Sichuan. Geol. Discus.

and Criticisms, v. 1, p. 651-656, (Chinese).

Not seen - unavailable through ILL.

510 YANG CHUNGJIAN, 1937. New Triassic and Cretaceous reptiles in China. Bulletin of the Geological Society of China, no. 17(1), p. 109-120, 10 refs.

Lower Cretaceous

511 YANG CHUNGJIAN, 1937. New vertebrate horizons in China. Bulletin of the Geological Society of China, no. 17, p. 269-288, illus.

Lower Cretaceous

512 YANG CHUNGJIAN, 1937. A new dinosaurian from Xinjiang. Palaeontologia Sinica (New Series C), Whole Series no. 2, p. 1-28, illus.

Not seen

513 YANG CHUNGJIAN, 1937. A discovery of bones in Shaanxi and Sichuan. Yu-Kung (Geog. Mag.), Shanghai, v. 7(5), p. 77-104, (Chinese).

No direct reference to the age, but the fossils discussed may be Upper Cretaceous.

514 YANG CHUNGJIAN, 1937. Bibliography of C.C. Young (pseudonym Chi-kushih), 1918 - May, 1937. Beijing: privately printed, 18 pp., (Chinese, with titles in English and German).

Not seen

515 YANG CHUNGJIAN, 1937. New localities of Chinese vertebrate fossils. Science (Shanghai), v. 21(5), p. 361-366, no refs., (Chinese).

This article includes some information on Lower Cretaceous dinosaurs and crocodiles.

516 YANG CHUNGJIAN, 1937. Review of Shandong fossils. L'Impartial (China), February, (Chinese).

Not seen - unavailable through ILL.

517 YANG CHUNGJIAN, 1944. Fossil hunting in China. Society of Vertebrate Paleontology, News Bulletin, v. 13, p. 14-16, illus., no refs.

A short report to the Society which describes the war-time palaeontology of China. It includes brief descriptions of Cretaceous dinosaur localities in Sichuan and various dinosaur footprints, as well as accounts of Triassic and Cenozoic fossil localities.

518 YANG CHUNGJIAN, 1945. A review of the fossil fishes of China, their stratigraphical and geographical distribution. American Journal of Science, v. 243, p. 127-137, 20 refs.

This brief review of the fossil fishes of China includes a short section dealing with the horizons, distribution and systematics of Cretaceous fish. Members of the genera ***Lycoptera*** (Lycopteridae), ***Sinamia*** (***Amiidae)*** and ***Mesoclupea*** (Lycopteridae) are mentioned, as well as listed together with some of their principal localities.

519 YANG CHUNGJIAN, 1947. Vertebrate paleontology in China. Society of Vertebrate Paleontology, News Bulletin, v. 22, p. 27-30, no refs.

A brief account of the palaeontological work accomplished in China since the end of World War II. The Cretaceous discoveries of the Japanese are mentioned.

520 YANG CHUNGJIAN, 1948. Notes on the occurrence of sauropod remains from North Kweichow, China. Science Record, v. 2, p. 200-206, illus., 7 refs.

Jurassic/Lower Cretaceous

521 YANG CHUNGJIAN, 1948. A review of Lepidosauria from China. American Journal of Science, v. 246, p. 711-719, illus.

Not seen

522 YANG CHUNGJIAN, 1950. Notes on a new turtle from Gansu, China. Palaeontological Novitates. Palaeontological Society of China, v. 8, p. 1-5, illus.

Not seen - unavailable through ILL

523 YANG CHUNGJIAN, 1951. Main vertebrate horizons in China, their geological and geographical distribution, faunistic character and correlation. Report of the Eighteenth International Geological Congress 1948, p.

66-73, illus., 18 refs.

Six main vertebrate horizons, from the Devonian to the Pleistocene, are briefly described and characterized. The description of the "Jura-Cretaceous" horizon includes a very short list of fauna and localities.

524 YANG CHUNGJIAN, 1954. Fossil reptilian eggs from Laiyang, Shandong, China. Scientia Sinica, v. 3, p. 505-522, illus., 11 refs.

The fossil egg material collected from the Middle and Upper Wangshih Series (Upper Cretaceous) at eleven localities near Laiyang, Shandong is listed in table form. Two types of eggs found are described and their stratigraphical distribution is discussed.

525 YANG CHUNGJIAN, 1957. A preliminary survey: Ornithischia from Laiyang, in the province of Shandong. Moskovskoye Obshchestvo Ispytateley Prirody, Byulleten, Otdel Geologicheskii, v. 62(4), p. 155-160, no refs., (Russian).

This article is a survey of the Ornithischia known from China as of 1956. It begins with a discussion of the classification of the Hadrosauridae, and goes on to review and describe the species of Upper Cretaceous hadrosaurs known from China and the rest of Asia. The Asian genera *Mandschurosaurus*, *Tsintaosaurus*, *Saurolophus* and *Bactrosaurus* are compared with the Upper Cretaceous counterparts from the Belly River and Lance Formations and the Edmonton Group of North America.

A survey of the Lower Cretaceous Psittacosauridae is used to develop an argument supporting this family as the ancestor of the Hadrosauridae. The author suggests that the Hadrosauridae had their origin in Asia. A discussion of the palaeoecology of both families is included.

526 YANG CHUNGJIAN, 1958. New sauropods from China. Vertebrata PalAsiatica, v. 2(1), p. 1-28, illus., 19 refs.

New saurischian material is described according to their geographic locality. A (?Lower) Cretaceous sauropod is reported from Outok district in Ikechaomeng, SW Ordos, Inner Mongolia. Several Upper Jurassic sauropods are also discussed. A summary of sauropod fossils known from China, which includes some Upper Cretaceous forms, concludes this article.

527 YANG CHUNGJIAN, 1958. The dinosaurian remains of Laiyang, Shandong. Palaeontologica Sinica, v. 16, New Series, p. 1-139.

This article reviews the fossil material collected from the Upper Cretaceous Wangshih Series (Chingkankou, Laiyang, Shandong) and the Lower Cretaceous Chinsan Beds (Toushan, Laiyang, Shandong). Detailed descriptions are given of the material, which includes the following from the Wangshih Series:

Tanius chinkankouensis (=*sinensis*) sp. nov. (Hadrosauridae), *Tsintaosaurus spinorhinus* gen. et sp. nov. (Hadrosauridae) and *Szechuanosaurus campi* (Megalosauridae). Some fragmentary remains of *Chingkankousaurus fragilis* gen. et sp. nov. (Megalosauridae) found nearby are also described.

The author goes on to review the Hadrosauridae known from Asia, and in addition to the previously described genera, brief descriptions are given of the members of the genera *Mandschurosaurus*, *Tanius*, *Saurolophus*, *Bactrosaurus* and *Yaxartosaurus*(=*Jaxartosaurus*).

Some *Psittacosaurus sinensis* sp. nov. (Psittacosauridae) material from the Chinshan Beds are also described, and the palaeoecology, palaeogeography and stratigraphy of the Asian Hadrosauridae are discussed.

528 YANG CHUNGJIAN, 1958. The first record of dinosaurian remains from Shanxi. Vertebrata PalAsiatica, v. 2(4), p. 231-236, 5 refs.

The fossil material from Lower and Upper Cretaceous deposits at Zuoyun, northern Shanxi are briefly described. Upper Cretaceous material includes partial and fragmentary remains of *Velociraptor mongoliensis* (Dromaeosauridae), *Microceratops gobiensis* (Protoceratopsidae) and *Bactrosaurus johnsoni* (Hadrosauridae).

529 YANG CHUNGJIAN, 1958. The mounting and restoration of *Tsintaosaurus*. Vertebrata PalAsiatica, v. 2, p. 56-59, no refs., (Chinese with English summary).

This article, illustrated with several photographs, describes the mounting of a specimen of *Tsintaosaurus spinorhinus* (Hadrosauridae) at the Institute of Vertebrate Paleontology and Paleoanthropology in Beijing. This specimen was collected from the Upper Cretaceous Wangshih Series near Laiyang, Shandong.

530 YANG CHUNGJIAN, 1959. On a new fossil egg from Laiyang, Shandong. Vertebrata PalAsiatica, v. 3, p. 34-35, illus.

A new type of thick-shelled fossil egg with well-developed canals, from the Upper Cretaceous Wangshih Series near Chaochun, Laiyang, is described and given the name *Oolithes megadermis* sp. nov.

531 YANG CHUNGJIAN, 1959. Chinese vertebrate palaeontology since the

liberation. Scientia Sinica, v. 8, p. 1153-1160, no refs.

This article includes a list of significant events in Chinese vertebrate palaeontology, as well as important discoveries, during the preceding ten years.

532 YANG CHUNGJIAN, 1959. Vertebrate paleontology after liberation. Acta Palaeontologica Sinica, v. 7, p. 81-84, no refs., (Chinese).

This paper is a summary of the important discoveries and developments in Chinese vertebrate palaeontology since 1949, and points out further research directions. Of particular relevance is a discussion concerning new stratigraphic research of the Upper Cretaceous Wangshih Series and the Lower Cretaceous Quingshan Formation, both in Laiyang (Shandong Province).

533 YANG CHUNGJIAN, 1961. Statistics of genera of fossil lower tetrapods of China. Vertebrata PalAsiatica, v. 3, p. 284-285, no refs., (Chinese).

This short article notes that of the 2500 genera of fossil lower tetrapods discovered world wide as of 1961, only 97 genera are known from China. Thus it appears that research on fossil lower tetrapods is still in its initial stages in China.

534 YANG CHUNGJIAN, 1961. Note on the skin imprint of *Yangtzepus yipingensis* from Sichuan. Vertebrata PalAsiatica, v. 1, p. 65-66, illus, no refs.

This article is a brief supplementary note describing the skin impressions found in the footprints of *Yangtzepus yipingensis* from Sichuan. The author suggests the pattern is from the skin of an ornithischian dinosaur. No age or formation is listed.

535 YANG CHUNGJIAN, 1961. On two new fossil lizards of China. Vertebrata PalAsiatica, v. 5, p. 115-120, illus., (Chinese with English summary).

Not seen

536 YANG CHUNGJIAN, 1963. Note on a new locality of dinosaurian remains from Taiho, Chiangi, S.E. China. Vertebrata PalAsiatica, v. 7, p. 48-51, illus., 3 refs., (Chinese with English summary).

Lower Cretaceous

537 YANG CHUNGJIAN, 1963. Cretaceous and Paleocene vertebrate horizons of

North Guangdong. Scientia Sinica, v. 12, p. 411.

Fossil material collected in the lower beds of north Guangdong includes that of turtles, small dinosaurs and nests of dinosaurs eggs.

538 YANG CHUNGJIAN, 1964. Note on dinosaurian fossils collected by Yuan from Xinjiang and Inner Mongolia. Vertebrata PalAsiatica, v. 8(4), p. 398-401, 2 refs., (Chinese with English summary).

539 YANG CHUNGJIAN, 1964. On a new pterosaurian from Xinjiang, China. Vertebrata PalAsiatica, v. 8(3), p. 221-256, illus., 19 refs., (Chinese with English summary).

Lower Cretaceous

540 YANG CHUNGJIAN, 1964. New fossil crocodiles from China. Vertebrata PalAsiatica, v. 8(2), p. 189-208, illus., 15 refs.

This article describes the new crocodile *Eotomistoma multidentata* gen. et sp. nov.(= *Ikechosaurus sunailinae*, Champsosauridae) from the lower part of the Upper Cretaceous of Ikechaomeng, Inner Mongolia. In addition, other material from the Palaeocene is described. A review of fossil crocodiles from China is included and summarized in table form.

541 YANG CHUNGJIAN, 1965. Fossil eggs from Nanhsiung, Guangdong and Ganzhou, Jiangxi. Vertebrata PalAsiatica, v. 9(2), p. 141-170, illus., 8 refs., (Chinese with English summary).

This paper is a general study of all the fossil eggs collected from the Upper Cretaceous Nanhsiung Group of Guangdong and Jiangxi from 1962 to 1964. During this time 2916 fragments, 78 complete eggs and nine complete nests were collected. All of this material is classified into the following newly described species:
Oclithes rugustus,
O. elongatus,
O. spheroides and
O. nanhsiungensis.
The author describes each type of eggshell and discusses their distribution in Asia, their stratigraphy, origin and some aspects of their biology.

542 YANG CHUNGJIAN, 1965. Note on the reptilian remains from Nanhsiung, Guangdong. Vertebrata PalAsiatica, v. 9(3), p. 292-297, illus., 4 refs., (Chinese with English summary).

From 1962 to 1964, Chinese palaeontologists collected from localities near Nanhsiung a large number of dinosaur eggs, a nearly complete specimen of the turtle *Nanhsiungchelys wuchingensis* (Nanhsiungchelyidae[Chelonia incertae sedis]) and some extremely fragmentary remains of several dinosaurs and a lizard. The briefly described dinosaur fragments include material from the following groups: Coelurosauria, Carnosauria, Sauropoda, Hadrosauria and Nodosauria. Based on this assemblage, the author concludes the material is Upper Cretaceous in age.

543 YANG CHUNGJIAN, 1973. Additions to the pterosaurian fauna from Urho, Xinjiang. *In* Reports of the Paleontological Expedition to Xinjiang (II): The Pterosaurian Fauna from Urho, Xinjiang. China: Academia Sinica, Memoirs of the Institude of Vertebrate Paleontology and Paleoanthropology, no. 11, p. 34-35, (Chinese).

Lower Cretaceous

544 YANG CHUNGJIAN, 1973. Pterosaurs from Urho. *In* Reports of the Paleontological Expedition to Xinjiang (II): The Pterosaurian Fauna from Urho, Xinjiang. China: Academia Sinica, Memoirs of the Institute of Vertebrate Paleontology and Paleoananthropology, no. 11, p. 18-34, (Chinese).

Lower Cretaceous

545 YANG CHUNGJIAN, 1973. Plesiosaur remains discovered in Junggar Basin, Xinjiang. *In* Reports of the Paleontological Expedition to Xinjiang, (II): The Pterosaurian Fauna from Urho, Xinjiang. China: Academia Sinica, Memoirs of the Institute of Vertebrate Paleontology and Paleoanthropology, no. 11, p. 13-17, (Chinese).

Lower Cretaceous

546 YANG CHUNGJIAN, 1973. A new fossil crocodile from Urho. *In* Reports of the Paleontological Expedition to Xinjiang (II): The Pterosaurian fauna from Urho, Xinjiang. China: Academia Sinica, Memoirs of the Institute of Vertebrate Paleontology and Paleoanthropology, no. 11, p. 37-44, illus., (Chinese).

Lower Cretaceous

547 YANG CHUNGJIAN, 1973. A Mesozoic Lacertilian from Gong County, Jiangxi Province. Vertebrata PalAsiatica, v. 11(1), March, p. 44-45, illus., 5 refs., (Chinese).

The new species *Conicodontosaurus kanhienesis* sp. nov. (?Agamidae[Lacertilia incertae sedis]) is described from a fossil mandible. If the identification is correct this fossil would be from the Upper Cretaceous.

548 YANG CHUNGJIAN, 1975. Bird feathers from the oil-shales at Chaka, Zeku County, Qinghai Province. Vertebrata PalAsiatica, v. 13(3), July, p. 163-164, illus., 3 refs.

This brief article describes several feather impressions found in an oil-shale and compares them to the feathers of recent birds. Although the age of the shale is indeterminate, it appears to be pre-Tertiary.

549 YANG CHUNGJIAN, 1979. Note on an egg from Ningxia. Vertebrata PalAsiatica, v. 17(1), January, p. 35-36, illus., 3 refs., (Chinese with English summary).

A broken fossil egg, collected from an indeterminate (?)Upper Cretaceous ceratopsian bonebed in Ningxia is briefly described in this paper. A few remarks concerning the origin of the egg are also included.

550 YANG CHUNGJIAN, 1979. Fossil footprints from Luanping County, Hebei Province. Vertebrata PalAsiatica, v. 17(2), April, p. 116-117, illus., 1 ref., (Chinese with English summary).

Some fossil footprints from Hebei province are briefly described and named *Changpeipus luanpingeris* sp. nov. No age or formation is mentioned.

551 YANG CHUNGJIAN, 1979. Fossil footprints from the Xishuangbanna Daizu Autonomous Region, Yunnan Province. Vertebrata PalAsiatica, v. 17(2), April, p. 114-115, illus., 4 refs., (Chinese with English summary).

Some Upper Cretaceous or Early Tertiary fossil footprints are briefly described and attributed to a member of the Agamidae.

552 YANG CHUNGJIAN and JAN HSITHIN, 1972. *Mamenchisaurus hochuanensis* sp. n. from Hochuan Province, China. China: Academia Sinica, Memoirs of the Institute of Paleontology and Paleoanthropology, v. 8, p. 1-30.

553 YANG CHUNGJIAN and SUN AILING, 1957. Note on a fragmentary carnosaurian mandible from Turpan, Xinjiang. Vertebrata PalAsiatica,

v. 1, p. 159-162, illus., 6 refs., (English with Chinese summary).

A fragment of dentary from a large carnivorous dinosaur is described in this article, and tentatively assigned to *Szechuanosaurus campi* (Megalosauridae). This is considered as the first evidence of dinosaurs from the Cretaceous of the southern slope of the Tienshan, east of the Turpan Basin, Xinjiang.

554 YANG CHUNGJIAN and ZHOU MINGZHEN, 1953. New Mesozoic reptiles from Sichuan. Acta Palaeontologica Sinica, v. 1(3), p. 87-111.

Not seen-not available by ILL

555 YANG CHUNGJIAN and ZHOU MINGZHEN, 1956. Latest discoveries in vertebrate palaeontology in China. Scientia Sinica, v. 5(3), p. 603-610, no refs.

Among the fossil finds mentioned in this article is a short report of a carnosaur dentary collected from the Cretaceous deposits of the Turpan Basin, Xinjiang. This dentary is fully described in Yang and Sun (1957).

556 YANG CHUNGJIAN and ZHOU MINGZHEN, 1956. The successes in vertebrate palaeontology in China. 1. New discoveries of fossil vertebrate remains. Vestnik Akademia Nauk USSR, no. 9, p. 55-59, no refs., (Russian).

557 YANG CHUNGJIAN and ZHOU MINGZHEN, 1957. Vertebrate paleontology in China. Moskovskoe Obshchestvo Ispytatelei Prirody. Byulleten, Odtel Geologichesku, v. 62(4), p. 139-142, no refs., (Russian).

This article is a general review of the history of paleontology in China from 1870 to 1956. No specific information concerning Upper Cretaceous vertebrates is offered.

558 YANG CHUNGJIAN and ZHOU MINGZHEN, 1962. Some reptilian fossils from the "Red Beds" of Guangdong and Zhejiang. Vertebrata PalAsiatica, v. 6, p. 130-135, illus., no refs., (Chinese with English summary).

This paper includes the description of some fragmentary dinosaur fossils. Several articulated metatarsals and phalanges of (?)*Leptoceratops* (Protoceratopsidae) were collected from an (?)Upper Cretaceous site near Shihsing, in northern Guangdong. Bones of *Tsintaosaurus* (Hadrosauridae) from the (?)Upper Cretaceous red beds (Chienteh

Series) in Pukiang, Zhejiang are also reported.

559 YANG CHUNGJIAN and ZHOU MINGZHEN, 1963. Cretaceous and Paleocene vertebrate horizons of north Guangdong. Scientia Sinica, v. 12(9), p. 1411, no refs.

This article briefly explains the dating of the Nanxiong Group of the Nanyung Basin of Guangdong. Unnamed turtles, dinosaurs and fossil eggs were used to date the Upper Cretaceous series.

560 YANG CHUNGJIAN, DONG ZHIMING and YE XIANGKUI, 1973. Pterosaurian fauna from Urho, Xinjiang. Academiia Sinica, Institute of Vertebrate Paleontology and Paleoanthropology, Memoir, v. 11, p. 1-51, illus., (Chinese).

Not seen - unavailable through ILL

561 YANG CHUNGJIAN and WANG CHUNYI, 1959. The new collections of dinosaurian egg fossils at Laiyang, Shandong Province. Vertebrata PalAsiatica, v. 1(1), p. 53-54., (Chinese).

Not seen

562 YANG CHUNGJIAN and ZHAO XIJIN, 1972. *Mamenchisaurus hochuanensis*. 1st Special Publication by the Institute of Vertebrate Paleontology and Paleoanthropology, Academia Sinica.

Not seen, (Diplodocidae)

563 YE XIANGKUI, 1963. Fossil turtles of China. Paleontologia Sinica (New Series C), no. 18, p. 1-112, illus., (Chinese with English translation).

The author presents a brief summary of the articles published as of 1963 dealing with fossil turtles of China. The bulk of this article, however, is a complete review of the eleven families, thirty-two genera and fifty-eight species of Chinese fossil turtles. Thirteen species are described for the first time. Although the majority of species described in the paper are from the Cenozoic, a considerable number are Jurassic and Cretaceous in age. The following is a list of Cretaceous species:

Aspideretes(=*Trionyx planicostatus*, Trionychidae) - Upper Cretaceous (Chiayin, Heilongjiang)
Chengyuchelys baenoides (Pleurosternidae)- Upper Jurassic or Lower Cretaceous (Sichuan)
Plesiochelys radiplicatus (Plesiochelyidae)- Upper Jurassic or Lower Cretaceous (Sichuan)

Peishanemys latipons (Dermatemydidae)- Lower Cretaceous (Peishan Yuman, Gansu and Toushan, Laiyang)
Tsaotanemys sp. (Dermatemydidae)- Cretaceous (Chiayukuan, Gansu)
Sinochelys applanata (Dermatemydidae)- Lower Creatceous (Hsintai, Shandong)
Yumenemys sp. - Cretaceous (Chiayukuan, Gansu)
Scutemys tecta (?Platysternyidae[Chelonia incertae sedis - Fam. undesig.])- Lower Creatceous (Hsintai, Shandong)
Sinemys lens (Sinemydidae[Chelonia incertae sedis]) - Lower Cretaceous (Hsintai, Shandong and Huanhsien, Gansu).

564 YE XIANGKUI, 1965. New materials of fossil turtles of Inner Mongolia. Vertebrata PalAsiatica, v. 9, p. 47-69, illus., 14 refs, (Chinese with English summary).

A number of Mesozoic and Cenozoic turtles collected from Inner Mongolia in 1959 and 1960 are described in this paper. Specimens of *Aspideretes maortuensis* sp. nov. and ?*A. alashanensis* sp. nov. (Trionychidae), from what are possibly Upper Cretaceous deposits at Maortu, Alashan, are described. Some fragmentary turtle remains from Iren Dabasu are also discussed.

565 YE XIANGKUI, 1966. A new Cretaceous turtle of Nanxiong, northern Guangdong. Vertebrata PalAsiatica, v. 10(5), p. 191-200, 11 refs., (Chinese with English summary).

A relatively complete fossil turtle, collected from the Upper Cretaceous Nanxiong Group near Nanxiong, Guangdong, is described in detail. A review of its characteristics led the author to classify it as *Nanhsiungchelys wuchingensis* gen. et sp. nov., (Nanhsiungchelyidae, n. fam.[Chelonia incertae sedis - Fam. undesig.).

566 YE XIANGKUI, 1973. Chelonia fossils from Urho. *In* Reports of the Paleontological Expedition to Xinjiang (II): The Pterosaurian fauna from Urho, Xinjiang. China: Academia Sinica, Memoirs of the Institute of Vertebrate Paleontology and Palaeoanthropology, no. 11, p. 8-11, illus., 4 refs., (Chinese).

Lower Cretaceous

567 YE XIANGKUI, 1974. A new discovery of a fossil *Trionyx* in Fujian Province. Vertebrata PalAsiatica, v. 12(3), July, p. 190-192 , illus., 8 refs., (Chinese with English summary).

A nearly complete carapace, collected from Cretaceous strata in Fujian

Province, is used to describe a new species of turtle, *Trionyx fuchiensis* sp. nov., Trionychidae.

568 YE XIANGKUI, 1974. A note on a new species of a fossil dermatemydid from the Xinjiang. Vertebrata PalAsiatica, v. 12(4), p. 257-261, illus., 8 refs., (Chinese).

A new species of fossil turtle, *Mongolemys turfanensis* sp. nov. (Dermatemydidae) is described and compared to *M. elegans*. Specimens of this new turtle were collected from the Upper Cretaceous of Turpan, Xinjiang as well as the Palaeocene of Shanshan.

569 YE XIANGKUI, 1978. The earliest fossil chelonian from our country. Vertebrata PalAsiatica, v. 16(3), July, top inside back cover, no refs., (Chinese).

570 YE XIANGKUI, 1979. Fossil turtles in China. Papers of the Second Congress of Stratigraphy, China, p. 1-8, (abstract), (Chinese).

Not seen

571 YEFIMOV, M.B.: SEE EFIMOV, M.B.

572 YEFREMOV, I.A.: see EFREMOV,I.A.

573 YEH HSIANG-KUEI: see YE XIANGKUI

574 YOUNG CHUNG-CHIEN: see YANG CHUNGJIAN

575 ZENG DEMIN and ZHANG JINJIAN, 1979. Fossil dinosaur eggs from the western part of the Donting Basin, Hunan Province. Vertebrata PalAsiatica, v. 17(2), April, p. 131-136, illus., 15 refs., (Chinese with English summary).

The following dinosaur eggs from the Late Cretaceous red beds in western Donting Basin, Hunan are discussed: *Phaceloolithus huananensis* gen. et sp. nov., *Elongatoolithus magnus* sp. nov., and *Elongatoolithus* sp.

576 ZHAI RENJIE, 1978. The fossil mammals from the Taoshuyuanzi Series of eastern part of the Turpan Basin. Academia Sinica, Institute of

Vertebrate Paleontology and Palaeoanthropology, Memoir, v., p. 126-131, 13 refs., (Chinese).

Not seen - unavailable through ILL

577 ZHANG FAKUI, 1984. Fossil record of Mesozoic mammals of China. Vertebrata PalAsiatica, v. 22(1), p. 29-38, illus., 40 refs., (Chinese with English summary).

This review of mammalian evolution during the Mesozoic of China concentrates on Triassic and Jurassic mammals, but briefly mentions a few Upper Cretaceous developments.

578 ZHANG MIMAN and LIU ZHICHENG, 1977. Two primitive true bony fish (Euteleostei); the Manzhou fish [*Manchuricthyes*] and the Songhua fish [*Sungarichthys*]: part III of the Cretaceous fossil fish of the northeast. Vertebrata PalAsiatica, v. 15(3), July, p. 184-193, illus., 20 refs.

Sungarichthys longicephalus (Lycopteridae) from the Upper Cretaceous of the Nenjiang Group (Fulongquun Group) of Hama in Qian Gorlos Mongolia Autonomous County and Fulongquan in Nong'an County, Jilin Province is discussed.

Manchurichthys (Lycopteridae) is from the Lower Cretaceous.

579 ZHANG MIMAN and ZHOU JIAJIAN, 1974. Fish fossils from the latter part of the Mesozoic of Zhejiang Province (brief report). Vertebrata PalAsiatica, v. 12(3), July, p. 183-186, 5 refs., (Chinese).

Lower Cretaceous

580 ZHANG MIMAN and ZHOU JIAJIAN, 1976. The discovery of the genus *Plesiolycoptera* in the Song-Liao Basin, and the origin of the Osteoglossomorpha: Part I of the Cretaceous fossil fish of the northeast. Vertebrata PalAsiatica, v. 14(3), July, p. 146-153, illus., 18 refs.

A new type of fossil fish, ***Plesiolycoptera dagingensis*** gen. et sp. nov. (Hiodontoidea family incert sedis) was recovered from cores drilled in the Song-Liao Basin, Heilongjiang Province. The fossil material, collected from the upper part of the Cretaceous Yaojin Group, is described in the article, and compared to fossil fish from various other localities. The origins of the Osteoglossomorpha are also discussed.

581 ZHANG MIMAN and ZHOU JIAJIAN, 1977. Fossil fish from the late Mesozoic of Zhejiang Province. Academia Sinica, Intstitute of Vertebrate Paleontology and Paleoanthropology, Memoir, v. 12, 60 pp., illus., 107

refs., (Chinese with English summary).

Not seen - unavailable through ILL

582 ZHANG MIMAN, ZHOU JIAJIAN and LUI ZHICHENG, 1977. The age and depositional environment of the Cretaceous fossil fish-bearing strata of the Northeast: part IV of the Cretaceous fossil fish of the Northeast. Vertebrata PalAsiatica, v. 15(3), July, p. 194-197, illus., 3 refs., (Chinese with English summary).

Lower Cretaceous

583 ZHAO XIJIN, 1962. A new species of psittacosaur from Laiyang, Shandong. Vertebrata PalAsiatica, v. 6(4), p. 349-360.

The lower Cretaceous dinosaur *Psittacosaurus youngi* sp. nov. (Psittacosauridae) is described.

584 ZHAO XIJIN, 1980. Reports of the Paleontological Expedition to the Xinjiang: 4) Stratigraphy of the Mesozoic vertebrate fossils from the northern part of the Xinjiang. Academia Sinica, Institute of Vertebrate Palaeontology and Palaeoanthropology, Memoir, v. 15, 120 pp., illus., 53 refs.

Lower Cretaceous

585 ZHAO XIJIN, 1982. Notes on some opinions of Mesozoic and Cenozoic vertebrate and vertebrate-bearing beds and stratigraphy of northern Xinjiang. Proceedings of Symposium on Petroleum Geoscience, Academia Sinica, (Division of Earth Science), p. 127-131.

Not seen

586 ZHAO XIJIN, 1983. Phylogeny and evolutionary stages of Dinosauria. Acta Palaeontologica Polonica, v. 28(1-2), p. 295-306.

This article contains new suggestions about the phylogeny of dinosaurs based on Chinese and other material. The author erects the new suborder Armatosauria within the Ornithischia and introduces eight new superfamilies: Tianchungosauroidea, Chaoyoungosauroidea, Psittacosauroidea, Pachycephalosauroidea, Sceildosauroidea, Stegosauroidea, Oligosacralosauroidea and Polysacralosauroidea.

587 ZHAO ZIKUI, 1975. The microstructure of fossil dinosaur eggs from Nanxiong County, Guangdong Province: 1) Concurrent with a discussion on the

problem of the classification of fossil dinosaur eggs. Vertebrata PalAsiatica, v. 13(2), April, p. 105-117, illus., 32 refs., (Chinese).

A detailed microscopic study of Upper Cretaceous fossil dinosaur eggs was used to establish three new genera in the new family Elongatoolithidae. The new genera are:

Macroolithus rugustus from Nanxiong County, Guangdong
M. yaotunensis from Yaotun, Nanxiong County
Elongatoolithus elongatus from the Wangshih Series, Laiyang, Shandong Province, and Nanxiong County
E. andrews from Shuikoubein, Nanxiong County
Nanhsiungoolithus chuetienensis from Nanxiong County.

588 ZHAO ZIKUI, 1978. Inquiry into Late Cretaceous dinosaur eggshell thinning and related problems. Vertebrata PalAsiatica, v. 16(4), p. 213-221, 29 refs., (Chinese).

The author notes that dinosaur eggshells become thinner, higher in the stratigraphic sequence, a phenomenon also seen in the fossil eggs found in the Upper Cretaceous of France. It is suggested that this may have contributed to the extinction of the dinosaurs. Dinosaurs may be divided into the following age assemblages:

"Honeycomboolithus" and "Flatoolithus" from the early Upper Cretaceous of Xixia Basin of Henan Province.
Spheroolithus from the mid Upper Cretaceous of Wangshih
Ovaloolithus, *Macroolithus* and *Elongatoolithus* from the late Upper Cretaceous of the Wangshih Series and Nanxiong Formations.

589 ZHAO ZIKUI, 1979. The discovery and significance of a new type of dinosaur eggs and a dinosaur footprint from Neixiang County, Henan Province. Vertebrata PalAsiatica, v. 17(4), p. 304-309, illus., 9 refs., (Chinese with English summary).

A clutch of 16 dinosaur eggs with a footprint impressed on it was collected from the Cretaceous of Xiaguan Basin, Neixiang County, Henan Province. The eggs are described as *Youngoolithus xianguanensis* gen. et sp. nov., (Faveoloolithidae). The footprint is a positive impression of the left pes and was probably made by the animal that laid the clutch.

590 ZHAO ZHIKUI and CHIANG, Y.K., 1974. Microscopic studies on the dinosaurian egg-shells from Laiyang, Shandong Province. Scientia Sinica, v. 17(1), p. 73-90, 14 refs.

From the microscopic examination of fossil egg and eggshell fragments from the Late Cretaceous Wangshih Series of Laiyang, Shandong

Province, *Oolithes spheroides* can be divided into five different species: *O.chiangchiungtingensis*, *O. megadermus*, *O. irenensis*, *O. chinkangkournsis* and *O.* laminadermus. These types differ in stratigraphic distribution.

591 ZHAO ZIKUI and DING SHANGREN, 1976. The discovery of fossil dinosaur eggs in Alxa Left Banner, Ningxia Huizu Autonomous Region, and their significance. Vertebrata PalAsiatica, v. 14(1), p. 42-44, illus., 5 refs., (Chinese).

A number of broken fossil dinosaur eggs were collected from the Cretaceous sandstone of Alashan and were classified as *Faveoloolithus ningxianensis* gen. et sp. nov. The eggs are described and the pattern of the egg laying is noted to be similar to that of turtles. These eggs appear to be similar to eggs found in Mongolia, but different from those discovered in France.

592 ZHEN SHUONAN, 1976. A new hadrosaur species from Laiyang County, Shandong Province. Vertebrata PalAsiatica, v. 14(3), p. 166-168, 11 refs., (Chinese with English summary).

Hadrosaur remains of *Tsintaosaurus* sp. and *Tanius laiyangensis* sp. nov. (Hadrosauridae) are described.

593 ZHEN SHOUNAN and WANG CHUNYI, 1957. The short report about collecting Dinosauria and egg fossils at Laiyang, Shandong Province. Vertebrata PalAsiatica, v. 1(1), p. 55-57, (Chinese).

Not seen

594 ZHEN SHOUNAN and WANG CHUNYI, 1961. Note on the new material of *Tsintaosaurus spinorhinus*. Vertebrata PalAsiatica, v. 5, p. 72-73, 7 refs., (Chinese).

A femur and tibia of *Tsintaosaurus spinorhinus* (Hadrosauridae), collected from Laiyang County, Shandong Province in 1958 are described.

595 ZHEN SHUONAN, ZHEN BAIMING, MATEER, NIALL J., and SPENCER G. LUCAS, 1985. The Mesozoic reptiles of China. *In* Studies of Chinese Fossil Vertebrates (S.G. Lucas and N.J. Mateer, editors). Bulletin of the Geological Institutions of the University of Uppsala, New Series, v. 11, p. 133-150, illus., 200 refs.

This summary of the Mesozoic reptiles of China includes a review of the taxa by taxonomic group as well as a review of the faunas arranged stratigraphically. Reptiles from all the major groups, including the Cotylosauria, Testudines, Sauropterygia, Ichthyosauria, Lepidosauria, Thecodontia, Crocodilia, Pterosauria, Saurischia, Ornithischia and Therapsida are discussed. The reptilian faunas from China provide a nearly complete stratigraphic record of the Mesozoic, culminating in the ornithopod-*Tsintaosaurus* faunal complex of the Upper Cretaceous.

596 ZHENG JIAJIAN, TANG YINGJUN, QUI ZHANXIANG and YE XIANGKUI, 1973. Notes on the Upper Cretaceous-Lower Tertiary stratigraphical sections in Nanxiong Basin, Guangdong. Vertebrata PalAsiatica, v. 11(1), March, p. 18-30, illus., 26 refs., (Chinese with English summary).

On the basis of stratigraphical and palaeontological information provided in this paper the Red Beds of Nanxiong Basin, northern Guangdong, China can be divided into three formations: Nanxiong, Lofochai and Tanhsia. Of these, the Nanxiong Formation is Late Cretaceous and can be divided into three subsections.The fossil vertebrate fauna is given for the middle and upper parts.

Middle part: *Nanhsiungchelys wuchingensis* (Nanhsiungchelyidae[Chelonia incertae sedis - Fam. undesig.]), *Oolithes nanhsiungensis* (Chelonia), hadrosauria, *Oolithes rugustus*, *O. elongatus* (Dinosauria).

Upper part: ?Lacertilia, Coelurosauria, Sauropoda, Carnosauria, Nodosauria, Chelonia and dinosaur eggs, *Oolithes spheroides* and *O. rugustus* .

597 ZHOU JIAJIAN, 1976. Two new genera of fossil fish from the Late Cretaceous of the Northeast: part II of the Cretaceous fossil fish of the northeast. Vertebrata PalAsiatica, v. 14(4), p. 234-241, illus., 11 refs.

Two new genera of salmoniforme fish are described from the Upper Cretaceous deposits (Nenjiang Group) at Hama, Qian Gorlos Mongolia Autonomous County, Jilin Province. Twenty-nine specimens of *Jilingichthys rapax* gen. et sp. nov. (Salmoniformes, fam. incerta sedis) were found at this location and are reported to be similar to *Guadryella guadryi* and *Humbertia operta (both Fam. undesig.)* from Lebanon, as well as *Manchurichthys uwatokoi* and *Sungarichthys longicephalus* (both Lycopteridae) from China, although important differences exist. In addition, 11 specimens of *Hama macrostoma* gen. et sp. nov. (Neoteleostei, order incerta sedis) were discovered. This new species appears to be similar to *Halec haueri* and *H. eupteryguis* (Enchodontidae[=Halecidae]) of Europe, and *Phylactocephalus mierolepis* (Enchodontidae[=Halecidae]) and *Hemisaurida hakehensis* (Myctophidae[=Halecidae]) of Lebanon.

598 ZHOU MINGZHEN, 1950. Beginning of the Sino-Soviet Central Asiatic Paleontological Expeditions. Vertebrata PalAsiatica, v. 3(1), p. 57, no refs.

Non-technical.

599 ZHOU MINGZHEN, 1951. Notes on the late Cretaceous dinosaurian remains and the fossil eggs from Laiyang, Shandong. Bulletin of the Geological Society of China, no. 31, p. 1-4, 89-96.

Not seen - unavailable through ILL

600 ZHOU MINGZHEN, 1953. The significance of the finds of Mesozoic fossil mammalian in the northeast [provinces]. Acta Palaeontologica Sinica, v. 3, p. 150-156 (Chinese with English summary).

Not seen-not available by ILL

601 ZHOU MINGZHEN, 1954. Additional notes on the microstructure of the supposed dinosaurian egg shells from Laiyang, Shandong. Scienta Sinica, v. 3, p. 523-525, illus.

The microstructure of *Oolithes spheroides* and *Oolithes elongatus* are discussed. Some complete eggs show the original structures of the white and yolk which have been replaced by fine crystals of calcite. The presence of a cuticle layer, generally not fossilized, indicates that the eggs were laid under humid conditions.

602 ZHOU MINGZHEN, 1954. Cretaceous turtles from Laiyang, Shandong. Acta Palaeontologica Sinica, v. 2(4), p. 404-407, no refs.

The 4th right costal of (?)*Glyptops* (Pleurosternidae[=Glyptopsidae]) from Chingkankou, Laiyang, Shandong is described. A perfectly preserved complete shell and other material of *Peishanemys latipons* (Dermatemydidae) is also described. *P. latipons* occurs in association with *Psittacosaurus* (Psittacosauridae) remains.

603 ZHOU MINGZHEN, 1959. The 1959 field season of the Sino-Soviet Paleontological Expedition (SSPE). Vertebrata PalAsiatica, v. 3, p. 218-221, illus., no refs.

This article gives a brief report of the 1959 field season of the Sino-Soviet Paleontological Expedition. The expedition explored from Tairum Nor (SE of Tung Gur) in the east to Edsin Gol Basin in the west. Twenty localities were visited and over 300 boxes of fosssil bones were collected.

604 ZHOU MINGZHEN, 1979. Chinese vertebrate research 1949 - 1979. Geology Society of America, Special Paper no. 187, p. 15-20, 30 refs.

The history of vertebrate paleontology in China is summarized with a brief description of the important work done on Devonian fishes, early Mesozoic reptiles and early Tertiary mammals.

605 ZHOU MINGZHEN, and RICH, T.H.V., 1984. New Mesozoic mammal sites from China. Alcheringa (Australia), v. 8, p. 304, 4 refs.

Lower Cretaceous

606 ZHOU MINGZHEN and ROZHDESTVENSKY, A.K., 1960. Exploration in Inner Mongolia - a preliminary account of the 1959 field work of the Sino-Soviet Paleontological Expedition (SSPE). Vertebrata PalAsiatica, v. 4(1), p. 1-10, illus, no refs.

A preliminary description is given of the fossil material and localities investigated by the 1959 Sino-Soviet Paleontological Expedition Paleontological Expedition. A sketch of the expedition route is included. From Iren Dabasu two partial skeletons of *Bactrosaurus* (Hadrosauridae) and other dinosaur, turtle and crocodile materials were collected. From Maortu in the Alashan District, sauropod, ornithopod and carnosaur material was collected.

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